DEVELOPMENT AND CONFLICT IN THAILAND

by Joyce Nakahara and Ronald A. Wilton

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FOREWORD

The paper by Joyce Nakahara and Ronald Witton in this number of the Southeast Asia Data Papers reflects, on the one hand, the detailed knowledge that is the hallmark of the best area studies and, on the other, the rigorous empirical testing of a particular theory of social change that is the particular emphasis of comparative studies. Thus, the paper represents an intersection of these styles of work that results in a kind of intellectual "hybrid vigor."

As it happens, this paper derives from a particular theory of social change that was generated in the course of my work on intervillage systems and community differentiation. Since the theory is not widely known, and the paper assumes a fairly detailed knowledge of it, a brief introduction seems in order. This particular theory of social change has been labeled "structural-symbolic" because it deals with whole structures, such as communities or nations, and because its starting assumption is that all the phenomena of culture and society may be construed as patterns of social symbols. The key variables are all defined in terms of formal characteristics of social symbols. Differentiation is the diversity of social symbols maintained by a social system, while solidarity is the degree of "focus" that such symbols manifest. The third variable is relative centrality, defined as the degree to which symbols maintained by subsystems are incorporated into the symbolic structure of the system.

Social symbols are those sign-vehicles, be they words, behavior, or artifact, that convey meaning. The usage here is closer to the meaning of "culture" than it is to the somewhat rarified interpretation of symbolism current in studies of myth or religion. In other words, virtually every aspect of human activity is symbolic in this sense. The only proviso is that the activity represent the system level under study. Thus, a Thanksgiving dinner is the patterned activity of the family unit, while a community picnic is a datum appropriate to the study of the community.

Structural-symbolic theory takes the idea of system levels quite seriously for two reasons. First, the theory purports to hold for any system level, from family to nation. Second, and more important for the dynamics of the hypotheses, the theory is phrased as an interplay between system and subsystem and, in general, certain patterns of symbolic activity at the subsystem level are thought to lead to changes in the structure of the system. Thus, "subcommunities" (i.e. neighborhoods, barrios,

etc.) are subsystems of communities, and these in turn are interpreted as constituent units of intercommunity systems, and so on. Admittedly, the system-subsystem postulate is a simplification. Not all the activity of subsystems occurs under the auspices of the containing system and in many cases, such as the intervillage structure of isolated New Guinea tribes, or the weak national structure of early Italy or France, it is difficult to argue that the system really exists. On the other hand, it is impossible to do theory without making simplifying assumptions, and this one seems to hold widely enough--and the exceptions are manageable--to justify its use.

The third assumption has to do with "what makes things go." It is assumed that a social system, that is, a symbolic structure in the terms of the theory, will attempt to reduce any "communication discrepancy" by developing an alternative communication strategy. In explication of this assumption, one notes first that it is anti-reductionist. It says in effect that changes in families, communities, intervillage systems, etc., can be understood without recourse to individual-level variables such as values, frustrations, or needs. The assumption also denies the usual "motivation" postulate of those social theories that turn on the maximization principle. In this theory communities are not attempting to maximize anything, even their symbolic structure. More specifically, it denies that communities attempt to maximize control over resources, satisfaction of the individual members, or, more generally, the amount of gross energy processed by the system. It is not denied that communities may do all these things, and that much community rhetoric is oriented to such goals, but their relevance to this particular theory of social change is nil.

Perhaps the fundamental aspect of the motivation postulate is that system activity can be interpreted as a composite of communication strategies. Actually, this is simply another way of talking about social systems as symbolic structures, because the variables of the theory--differentiation, solidarity, and relative centrality--amount to dimensions of communication. As defined above, they are formal dimensions of the social symbols maintained by the system, but symbolic implies communication, so the variables are also dimensions of communication. All this is taken as true by definition, but it is important to be explicit about it, because when the theory is actually used one must keep in mind that the variables are both dimensions of structure and ongoing communication. Thus, the motivation postulate says that a discrepancy between two dimensions of symbolic structure tends to result in changes in other such communication patterns. In particular, the ratio of high differentiation to low relative centrality is hypothesized to lead to increased solidarity, as will be discussed in detail below.

The main problem that the theory deals with, although it is not the only one, is why some systems differentiate structurally while others do not. Empirical research on this problem requires the study of a sample of systems, such as all the villages in a particular region, at two points in time. A technique called the "macrosurvey" has been worked out for collecting the requisite data, and an analysis format is also available. Briefly, information is collected by interviewing one informant in each place. Since the object of the research is to construct variables that reflect the symbolic organization of the whole community, the interviewer asks questions such as whether or not there is a primary school, a hardware store, a doctor, etc., in the community and whether or not these existed, say, 15 years ago. It is assumed that the presence of such institutionalized patterns reflects, in this case, increasing diversity of the symbolic structure, that is, differentiation of the community. Similar questions get at the degree of "coherence" of such institutions, and whether or not the community as a whole is recognized in the symbolic structure of the system. This is the technique that has been used in most of the research done so far. However, inasmuch as the object of data collection is to develop structural variables--dimensions of the system as a system in contrast to aggregations of subunits that must be assumed to stand for system properties--it is equally feasible to use certain kinds of documentary data. Thus, Nakahara and Witton use available data on the varieties of banks in Thai provinces as the basis of one of their differentiation scales.

Briefly stated, the theory attempts to explain increases in the differentiation of subsystems--provinces in the Thai case--as the result of a shift in their position in the total communication structure. Such a change in the subsystem's communication niche, that is, a shift in its relative centrality, is brought about by a solidarity movement. Under certain conditions of structural discrepancy, as specified by the first hypothesis given below, the symbolic structure of a subcommunity "turns in on itself," and develops a high degree of focus or coherence. Such solidarity can be considered the trigger for change which may, under certain conditions, result inean increase in the differentiation level of the subsystem. The variable that conditions whether the solidarity-relative centrality-increased differentiation sequence will actually run its course is the degree of centrality--the "comprehensiveness"--of the system's symbolic structure. If the intervillage system's structure has loose integration at the beginning of the sequence but then increases it as the process moves on, subsystem differentiation comes about.

The hypothesis that bears on the Nakahara-Witton paper may be stated as follows: 1. An increase in this differentiation-relative centrality ratio will lead to an increase in subsystem solidarity.

This hypothesis is based on the previously stated assumption that subsystems tend to develop alternative communication strategies when they are caught in a communications discrepancy. The particular discrepancy stated in hypothesis 1 is the situation where the subsystem's level of differentiation is high relative to the system's capacity to recognize and incorporate the subsystem's symbols. More crudely stated, the subsystem has more organizational capacity than it has access to the information in the larger structure. The communication leaders, that is, the incumbents of the various institutionalized roles of the community, recognize this disturbing situation and begin to communicate with each other in an attempt to make sense out of their predicament. Such internal intercommunication leads to the creation of "transformation codes" by which the members of the differentiated sectors of the community can understand each other. Various slogans, interpretations and policies are agreed upon, and various bridging symbols, sometimes in the person of a leader or a representative group, are found. But such symbolic bridging is what is meant by "symbolic focus," because in this manner the available social symbols are, so to speak, bent toward each other and a coherent definition of the situation is presented. Such a solidarity structure is inherently dramatic, in that the process of achieving a symbolic focus requires the heavy use of contrast and other modes of dramatization. The virtues of the in-group are opposed to the vices of the out-group and, as the ideology is elaborated, the contrast between good and evil, dark and light, etc., is more pronounced. Similarly, such dramatization involves the use of novel symbols or combines old symbols in new ways. A wide range of stratagems is used to call attention to the subgroup and to its stated plight.

The effect of such increasing solidarity is to force the communication leaders of the system to pay attention to the subsystem and, in at least a minimal, often a pejorative way, to find ways to think about it. At first, they may consider the actions of the subsystem as an annoyance or as a threat, but as the symbolic work goes on, the social symbols of the subsystem are gradually taken into account, at least in a temporary way. In this manner, an increase in subsystem relative centrality is achieved, and the degree of solidarity begins to decline. However, if at the same time the system develops a greater capacity to incorporate subsystem symbols apart from those that it is forced to deal with because of a solidarity thrust from below, then the new level of relative centrality achieved by the subsystem may be stabilized. But now a different kind of symbolic work occurs, in that the symbolic structure of the system begins to impinge upon the various symbols that were proposed by the subsystem. If, for instance, a religious sect has achieved a new communication niche in a community, then it becomes subject to the various pressures of the community and must develop a

means to accommodate them. A process of internal differentiation takes place, so that the diverse pressures can be dealt with more effectively. The sect may develop definite membership criteria, organize a Sunday school and begin using a more standardized format in its sermons. By now it may legitimately be called a "denomination," with an implied higher level of differentiation in its social organization, which, in the terms of this theory, is taken as direct evidence of an increased complexity of its symbolic structure.

Although the question is not handled by the theory, it is of interest to ask how a subsystem could develop a high level of differentiation relative to its centrality level in the first place. There are two ways, which on close scrutiny amount to the same thing. A group may develop a certain level of differentiation in one region or country and then migrate to another and end up with a low level of relative centrality in the new situation. The many and at least partly educated ethnic groups that came to American shores only to become isolated or marginal subcommunities in large cities are a ready example. The other mechanism that brings about a high differentiation-relative centrality ratio is that a particular group may achieve a certain level of differentiation as a member of a particular region but then the regional boundaries shift so that it is included in a new region but with a loss of centrality. Instead of migration of the subgroup as above, one has migration of regional boundaries, and the outcome is identical in both cases. Something of a mix of these two processes occurs in the new nations as frontiers are fixed for the first time (usually by colonial powers) and "free-floating" peripheral states and regions find themselves "locked" into systems. This is particularly relevant for nations such as Thailand where the traditional state had been defined by its center rather than its frontiers. In Thailand's case it was the activities by the colonial powers around it that determined which peripheral areas would be included in, and excluded from, the nation of Thailand.

The foregoing highly condensed statement is something of a revision of an earlier position that was contained in an article entitled "A Proposal for Cooperative Cross-Cultural Research on Intervillage Systems" (Young, 1966). The more recent version is presented in greater detail in "Reactive Subsystems" (1970) although that statement confines itself for the most part to hypothesis 1. Various measurement problems are discussed and illustrated in "Differentiation and Solidarity in Fifty Agricultural Communities" (Young, Spencer, Flora, 1968) and in a number of theses of which the most representative are those of Spencer (1967) and Weldon (1968), both of which deal with Latin American communities. For Southeast Asia, an important source that is directly relevant to the Thailand study is Witton's (1969) article on the development of cities in Java. Here the basic

technique of scaling institutional differences such as hospitals or schools as a measure of differentiation and computing change over time is vividly illustrated. The technique worked out in that paper is carried over to the Thai data and combined with another approach, based on a unique handling of census categories, that Nakahara developed.

In more general terms, the intellectual antecedents of this particular approach to social change may be traced from Durkheim through Redfield and thence to the more recent exponents of "Chicago sociology" such as Burke and Goffman. It is probably fair to say, however, that the particular methodological emphasis on structural variables results from an exposure to the techniques of sociological measurement. Many of these ideas, and certainly the climate of opinion, were generated at Cornell when the anthropology faculty was joint with that of sociology, and then the comparative study of social change was a dominant concern. To a great extent, although it may not appear so to persons not intimately acquainted with the early Cornell style in anthropology, the approach to the study of interrelated systems as well as the theory sketched above is "second generation" Cornell.

With the help of the theoretical sketch given above, it is possible to summarize what this paper by Nakahara and Witton attempts to do. At the same time, the somewhat abstract characterization of structural-symbolic theory given above can be made more concrete and understandable. The first part of the Nakahara-Witton paper is an exercise in structural measurement. The paper stresses the utility of Guttman scaling as a means of constructing a measure of differentiation, because it permits them to use such qualitative data as the presence or absence of institutions such as banks, hotels, newspapers, Young Buddhist Associations and all the variants of these. Also, it is possible to use the categories for occupations in the census. In the latter case, the question is not how many metal workers, tool makers, or chemists there are in each province, but whether there is at least one. At least one incumbent of the occupational role is required, but after that the real emphasis is on the presence or absence of a cultural category. Indeed, it is probably true that the census office, representing as it does the central government, has as much to do with the appearance of an occupational category as does the empirical fact of a practitioner in that occupation.

Thus, in addition to the particular technique of Guttman scaling another aspect of measurement emerges. From the point of view of the theory, the most important aspect of these measures of differentiation is that concrete institutional patterns are interpreted as reflecting increasing complexity of the symbolic structure. It will be recalled that the fundamental

starting point of the theory is that all sociocultural facts may be interpreted as symbolic. In line with this assumption, the differentiation scales that are built out of occupational categories or institutional patterns such as banks are interpreted as measuring the degree of differentiation of the cultural world.

When one works with the public and stabilized cultural categories that structural measurement requires, there is a good chance that some record is available of the state of those categories at an earlier point in time. Social systems must keep track of themselves in this way. Indeed a part of what one means by social system is an organization that produces data about itself. Exploiting this characteristic of structural attributes, Nakahara and Witton were able to construct differentiation measures for several points in time, spanning some 19 years. In short, they have measured the rate of structural change for Thai provinces and, more generally, their technique illustrates how the rate of change of structural differentiation may be measured for any social system that is large enough to generate data about itself.

The significance of this approach to the measurement of change is that it gives a direct measure of structure which is what most theories of social change talk about. The many technical problems of aggregate measures are avoided, but most of all structural measures bypass the fatal assumption required by aggregate measures that the measures of central tendency that are typically used may stand for the state of the system. Thus, the holistic study of culture need not continue to be restricted to impressionistic case studies; a technique of measurement is now available that gives sufficient precision for quantitative studies without sacrificing any essential element of the holistic perspective. In addition, with a structural understanding of the system as a whole, any subsequent case studies will be of much greater value.

It requires no great imagination to think of many important uses for a measure of structural differentiation for Thai provinces, but the particular use that Nakahara and Witton put it to is nothing short of daring. They first note that there exists crude but usable information on guerrilla activity in the provinces. Such information they trichotomize into "no guerrilla activity reported," "guerrilla activity reported" and "a military officer is in charge of combating the guerrillas." With such broad categories, they eliminate many problems of unreliability typical of such information. However, even if the data were unreliable, one would have to show that a particular bias existed in the reporting that affected their conclusions. The general effect of randomized error is to preclude any result at all.

But what does such guerrilla activity mean theoretically? From the point of view of the theory, the mobilization of effort and ideas that is represented by such activity is an indicator of solidarity. Thus, Nakahara and Witton are in a position to test hypothesis 1 if they can make one other assumption which, as it happens, turns out to be eminently reasonable. They assume that the high degree of "primacy" in Thailand, that is, the great gap between Bangkok and all the rest of the countryside, may be construed as evidence of low relative centrality for the hinterland provinces. If this is so, then any advance in differentiation on the part of such peripheral provinces would bring about the high differentiation-relative centrality ratio that, according to hypothesis 1 leads to solidarity. The test of this hypothesis is summarized in the tables in the latter part of the paper; suffice to say that their relationships are very strong indeed.

A consideration of the implications of structural-symbolic theory that emerge in this paper brings us full circle to the new trend in area studies mentioned at the outset. One of the fundamental purposes for the holistic training given area specialists is to equip them to direct, or at least advise on problems of change in developing countries. The assumption is that broad and detailed knowledge of an area helps both in proposing change programs and in avoiding the many pitfalls of such work. Certainly this position is well taken, but it seems even more true that if the area specialist has available some generalizations and perhaps a general theory of change, his position is even stronger. Such theory helps him to see empirical patterns that he might miss despite detailed knowledge of a country, and it also suggests many new change strategies. In short, area specialization in conjunction with comparative generalization is clearly a more adequate starting point than either one alone. The paper by Nakahara and Witton illustrates the new stance, and is an important step on the way to its realization.

Frank W. Young

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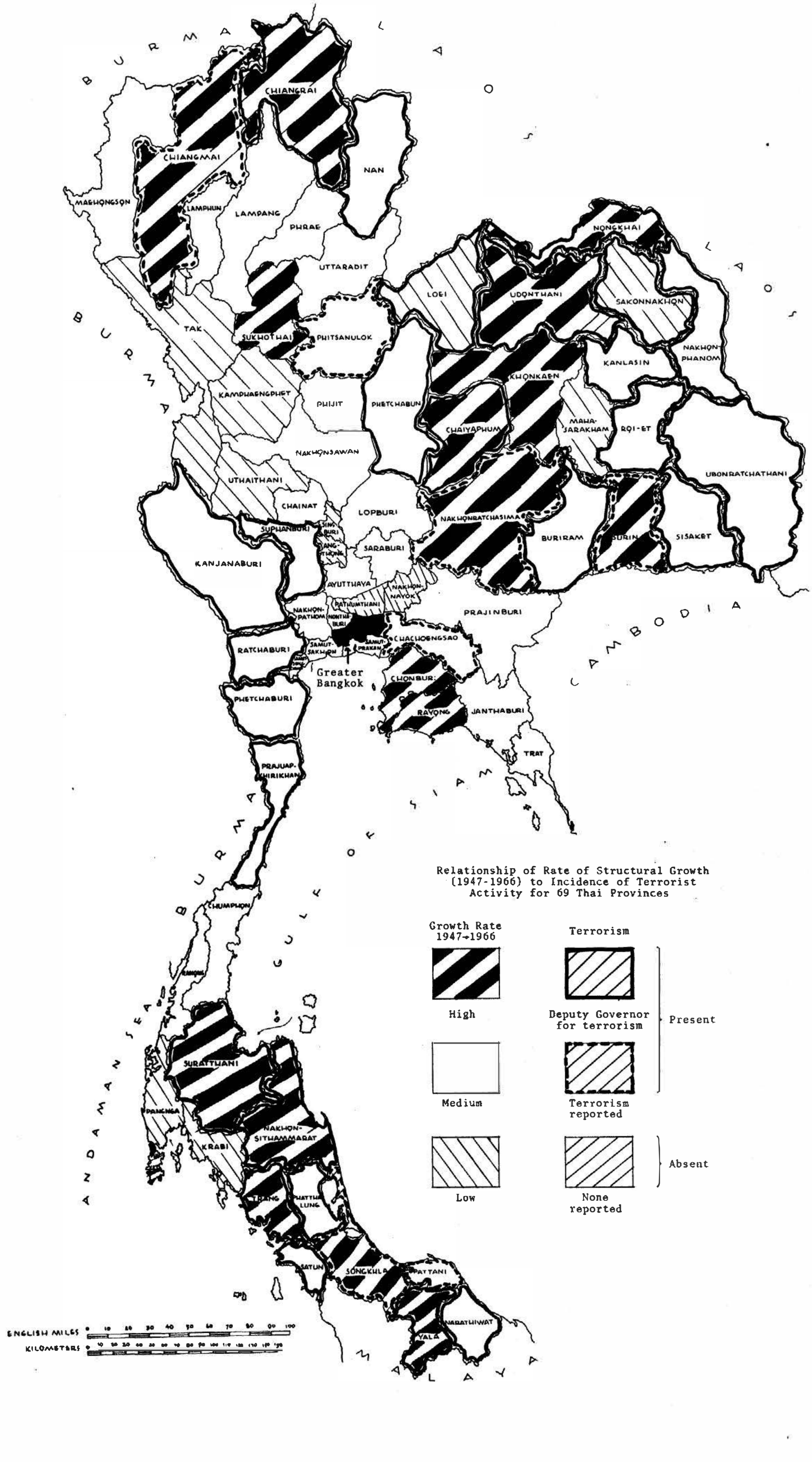

Growth Rate 1947-1966

- High
- Medium
- Low

Terrorism

- Deputy Governor for terrorism — Present
- Terrorism reported — Present
- None reported — Absent

INTRODUCTION

Studies of the process of development in countries of the Third World have utilized a variety of approaches, each with its own particular advantages and disadvantages, and in this regard studies of Thailand have been no exception. There are the national level studies, typically carried out by economists, which attempt to apply the often overly-sophisticated techniques of economic analysis, developed in the West, to the sometimes suspect and often crude data produced by the social accounting mechanisms of these developing nations. That these statistics are often suspect is not denied by those who produce them and even when they are reliable, their descriptive capacities may be called into question: for example, what does it mean to say that Kuwait now has the highest per capita income of any nation in the world if that income is derived from oil wells belonging solely to the sheik? or that Thailand has a certain number of doctors per 1,000 people if a highly disproportionate number of doctors lives in Bangkok and serves the elite?

A second approach is to confine oneself to regional analysis. (See, for example, Keyes, 1967a.) The region can be a very effective unit for analysis, especially for those nations where disparate geographical, political or ethnic groupings have been consolidated through the colonial process into a "nation." However, there is a general lack of regional-level data available, forcing one then to rely on impressionistic analysis. Below the regional level, whether the unit be the province, tribe, district or village, one encounters even more problems in collecting data, due either to the lack of such data or to doubts as to their reliability; this is especially true of data amenable to comparative study. These areas of analysis then become pre-eminently the domain of the case study. (See for example such studies as Sharp et al, 1953; and Keyes, 1967b.) While the case study allows much detail and insight one wonders whether the province, town or village chosen is representative of other units in the vicinity, how it compares with units elsewhere in the nation and how selectively the data were collected--either consciously or unconsciously.[1] In

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1. Moreover, the general lack of suitable samplingeprocedures and standardized theoretical frameworks render the case study unsuitable to a cumulative growth in knowledge and hence there arises a proliferation of case studies that bear little relationship or comparability to one another. For a discussion of this see Carol Owen (1969: chapter 2).

addition, the cost in time and money of carrying out such studies prohibits any random sampling that would allow one to make valid inferences to villages or provinces in general.

This paper, in an exploratory way, will attempt to apply a new approach to this problem and will attempt to overcome some of the above difficulties. Its immediate theoretical and methodological roots are in the work carried out by Frank W. Young and the Cornell Comparative Modernization Research Methods Project. The study will examine the sixty-nine[2] provinces of Thailand, and will examine the nature and correlates of development at this level, development being seen as a process of structural differentiation. In addition, the question of rates of development will be investigated with particular regard to regionalism and internal conflict which are rapidly becoming a major concern in Thailand.

The study itself has substantive, theoretical and methodological implications. Substantively, as studies such as this become more sophisticated and common, there will be a greater understanding of the interrelationships between the units that compose the nation. Moreover, the particular insights gained by case studies, both past and future, will be augmented by putting into a wider context the village or province chosen for such a study; e.g., whether it is one that was progressing at a faster or slower rate than its counterparts in the nation, whether it was situated in a region that was typical of the nation at that time period, or whether there were some peculiar characteristics possessed by it that would warn against taking it as a "typical" unit for study.

Second, as a result of carrying forward the analysis that has grown out of Young's work, applying his ideas to old but newly recognized phenomena and of developing new hypotheses, this study has theoretical implications in that it suggests an approach that may prove useful to students of countries which are at about the same stage of development as Thailand.

Third, since each research style develops its own research methods and analysis techniques, to say nothing of preferred

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2. There are actually 72 provinces in Thailand today. The 71st province, Kalasin, was created in 1947, but is not accounted for in the 1947 census and hence discussions of 1947 center around sixty-eight provinces. The 72nd province, Yasothon, was created after the period with which this study is concerned and hence is not included in the discussion. The two remaining provinces of Phranakorn and Thonburi, which make up Greater Bangkok, the metropolis, are excluded from this analysis.

data, the approach employed in this study has methodological implications. In particular, it offers the advantage of having great applicability to available qualitative data and much lessened reliance on census material. This latter fact, considering the suspicion with which the reliability of census data in the Third World is viewed, is of considerable significance. The approach employed here can, unlike the case study, lead to a cumulative growth in knowledge of the dynamics of development in Thailande

THEORETICAL ORIENTATION

The following theoretical orientations will guide our analysis. Social units, nations, regions, provinces, etc., are viewed as units within systems, and these systems in turn are seen as subsystems within larger systems. Thus, the region is composed of a number of provinces, but the region itself is part of a system of regions that go to make up the national system, which itself is a unit in the Southeast Asian system of nations which ultimately is a part of the international system of nations. Although these larger systems will be referred to we will concentrate on the provincial level.

To illustrate the approach of this study let us take a province and examine the types of questions that might be asked and the assumptions that will be made. Building on the work of Durkheim, the approach that Young has stimulated sees "development" as an increasing differentiation of information processing[4] in all spheres of life of any particular system. Thus, in the case of a province one might expect development to manifest itself not purely in economic terms, but also in a differentiation of information-processing institutions throughout all spheres of the system's publicly discriminated sectors. Thus, a differentiated province would be expected to have a greater variety of institutions in the educational, economic, public health, cultural, etc., spheres of provincial life than a less differentiated one. That this is the case has been shown by earlier studies (see for example, Spencer, 1967) and has also been replicated in this study. However, how does a province move from a less differentiated to a more differentiated level? One explanation for this has been developed by Young where he sees this as a process by which the province unites as a subsystem in what has been termed a "solidarity movement" to "buck" the larger system and communicate to the latter that it has inadequate access to the "information" flowing throughout the system. Moreover, having the capacity to handle a greater diversity of information than its "relative centrality"[5] in the

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3. For the original conceptual formulation out of which this study is derived, see Young (1966, and 1970).

4. "The framework assumes that for theoretical purposes, the phenomena of human society and culture may be construed as structures of meaning or information" (Young, 1966:46).

5. Seen by Young (1966:47) as a province's position relative to other provinces in the total configuration of intercommunicative paths.

system at present allows it, this subsystem, through its solidarity movement, will tend to organize, petition and generally attract the attention of the larger system until the structural bind in which it finds itself has been relieved.

An approach to the question of development in terms of structural "differentiation," which one would expect to be pervasive and manifest throughout a social structure, would give data and indices an interchangeability that is especially important in studies of nations in the underdeveloped world. This latter point will be made clearer as the study progressese Central to this study will be an ability to measure "development" or, as we shall term it, "structural differentiatione" For this, the Guttman scale of institutional complexity has proved eminently successful.

The study is divided into two parts, each centering on the test of an hypothesise Part I develops measures of differentiation and tests the hypothesis that the structural differentiation of a province is systemic and manifests itself in all spheres of public life and throughout the provincial structuree In testing this hypothesis, the study replicates the findings of a growing body of empirical studies and brings a new measurement technique to the study of "development" in Thailande

Part II uses the measures of the first part and examines the relationship between the dynamics of structural growth and the incidence of recent political conflict (terrorism and insurgency) in Thailand. In an exploratory manner the hypothesis is tested that if a rigid national system, dominated by the national capital, places barriers in the way of rapidly differentiating subsystems political conflict will resulte This hypothesis thus stands in sharp contrast to the conventional view of insurrection in Thailand as largely being the result of Communist insurgency exploiting local povertye

PART I

THE MEASUREMENT OF STRUCTURAL DIFFERENTIATION

The Guttman Scale as a Measure of Structural Differentiation

The Guttman scale is an instrument which cumulatively and unidimensionally measures social phenomena. It was first used to measure attitudes and other phenomena at the individual level of analysis, and its cumulative nature can be illustrated by a simple example. Imagine a scale beginning with (1) "Blacks are not inferior to whites," and gradually elaborating through the stages of (2) "Blacks should have the same rights as whites," (3) "Segregation is wrong," (4) "I would sit next to a Black on the bus," (5) "I would not object to a Black family living next door," and (6) "I would not object to my child marrying a Black." Anyone who holds view (4) is very likely to hold views (1-3) and anyone with view (6) would be expected to have all the other views.

This cumulative and unidimensional quality has been shown to characterize the process of development. Institutions of social systems, be they villages, towns, regions or nations, are ordered in a predictable and cumulative fashion as they become increasingly differentiated. (See Young and Fujimoto, 1965; and Young, Spencer and Flora, 1965; and similar works cited in these studies.) In a typical case, a small town may begin with a primary school, and then add in succession a junior secondary school, a junior trade school, a senior secondary school, an advanced trade school, and finally a university. The sequence is not always perfect, but the final outcome tends to be cumulative. The Young et ale and other works have shown that while a social system may be elaborating its institutional complexity in one area, for example the educational, there is also a concomitant elaboration of institutions in all other spheres, such as public health (hospitals), government and commerce. (See in particular Spencer, 1967; and Witton, 1969.) In addition, the physical appearance of the system becomes more differentiated and complex. Thus the whole social structure can be seen to be permeated by and to reflect its structural differentiation. (See Young and MacCannell, 1967.) Guttman scales measure this elaboration of institutions by directly tapping the structural differentiation of the relevant units and in its ability to do this lies their unidimensional quality. Aggregative measures can only measure social structure indirectly.

To gain familiarity with, and a feeling for, this instrument, a short discussion of a few specific scales may be helpful. The first scale (see Tables 1a and 1b) uses the presence or absence of occupations as the index of differentiation and reveals their diversity among the sixty-eight provinces of Thailand in one particular year, 1947. The scale has seventeen items (occupations) (*Thailand Population Census, 1947*) which progress from the most common--teacher--to the most infrequent --porter--and hence seventeen ranks, the rank of a particular province being determined by the scale step it has reached. Thus, for example, Chainat has a ranking of 7, Mahasarakham of 10, and Ayuthaya of 16. Furthermore, because the scale is cumulative Chainat has all the items from 1 through 7, Mahasarakham from 1 through 10, etc. This cumulative ordering is taken as a measure of the level of "development" of the provinces.

Table 1a. Scale of Occupational Differentiation for 68 Thai Provinces, 1947

Item Content	Proportion of Sample	Number of Item Errors
1 Teacher	1.00	0
2 Welder or metal worker	.97	1
3 Actor or musician	.94	2
4 Photographer	.84	7
5 Launderer	.81	5
6 Chauffeur	.81	7
7 Auto repairer	.73	6
8 Electrician	.69	7
9 Designer	.66	6
10 Money collector	.59	8
11 Train operator	.40	6
12 Typesetter	.39	7
13 Movie operator	.36	4
14 Undertaker	.33	10
15 Pharmacist	.31	9
16 Gas station attendant	.31	10
17 Porter	.26	9

Coefficient of scalability: .66

Source: *Thailand Population Census, 1947.*

Table 1be Scalogram of Occupational Differentiation for 68 Thai Provinces, 1947

Provinces Grouped by Scale or Error Pattern	Item Content (Corresponding to Items in Table 1a)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Suphanburi	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	1	1
Nontaburi	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Khonkaen	1	1	1	1	1	1	1	1	0	1	1	0	1	0	1	0	1
N. Sritammarat	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lampang	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N. Sawan	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1
N. Nayok	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	0	1
Chachoensao	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0
Yala	1	1	0	1	1	1	1	1	1	1	1	0	1	1	0	1	0
Ratburi	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0
Chonburi	1	1	1	0	1	1	1	1	1	0	0	1	1	0	1	1	0
Ayuthaya	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Saraburi	1	1	1	1	0	1	1	0	1	1	1	1	0	1	1	1	0
Phichit	1	1	1	1	1	1	1	1	0	1	0	0	1	1	0	1	0
Pitsanuloke	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
N. Pathom	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	0
Lopburi	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	0	0
Petchburi	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
Chiengmai	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
Korat	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
Samutsakorn	1	1	1	1	1	1	0	1	1	1	1	1	0	1	0	0	0
Suratthani	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0
Chumporn	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0
Songkhla	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0
Samutprakarn	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0
Angthong	1	1	1	1	1	1	0	0	1	0	1	1	0	0	0	0	0
Ubol	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	0
Pathumthani	1	1	1	0	1	1	0	1	1	0	1	0	0	0	0	0	1
Kanjanaburi	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	1	0
Prajuab	1	1	1	1	1	1	1	1	0	1	1	0	0	1	0	1	0
Prachinburi	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	0
Chiengrai	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0	0	0
Chantaburi	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1
Uthaithani	1	1	1	1	1	0	1	0	1	1	0	0	0	0	1	0	0
Udorn	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0
Phrae	1	1	0	1	1	1	1	1	1	1	0	0	0	0	1	0	0
Trang	1	1	1	1	1	1	1	1	0	1	0	0	1	0	1	0	0
Lamphun	1	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0
N. Panom	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
Mahasarakham	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
Ranong	1	1	1	1	1	1	0	1	0	1	0	0	0	0	0	0	1
Phuket	1	1	1	1	1	1	1	1	1	0	0	1	0	1	0	0	1
Samutsongkhram	1	1	1	1	1	0	1	0	1	0	0	0	0	1	0	0	0

Table 1b (continued)

Provinces Grouped by Scale or Error Pattern	Item Content (Corresponding to Items in Table 1a)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Phang-nga	1	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0
Singburi	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
Pattani	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0
Rayong	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0
Nan	1	1	1	1	1	0	1	0	1	0	0	0	0	0	0	0	0
Nongkhai	1	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	1
Narathiwat	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Tak	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Sukhothai	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0
Chainat	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1
Trad	1	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0
Patalung	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Chaiyaphum	1	1	1	1	0	1	0	0	0	1	0	0	0	0	0	0	0
Krabi	1	1	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0
Petchbun	1	1	1	1	0	1	0	0	0	1	0	0	0	0	0	1	1
Roi-et	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0
S. Nakorn	1	1	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0
Uttaradit	1	1	1	1	0	0	0	1	0	1	1	0	0	0	0	0	1
Surin	1	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0
Buriram	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Srisaket	1	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0
Satun	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Kamphaengphet	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Maehorngsorn	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Loey	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Note: "1" signifies the presence of at least one such item in the province; "0" signifies the absence of such an item.

However, it can be observed that some items are absent where they should appear, for example "electrician" in the case of Lamphun. Conversely, an item may be present where it would not be expected, for example, "movie operator" in the case of Udon. These are "error" cases and a satisfactory or at least plausible explanation should be possible for each one. However, that is the task of a case study and is outside the purview of this paper. What is important is that the scale shows that these *are* exceptions to the general pattern. These "errors" are, however, taken into consideration in computing the coefficient of scalability which measures the reliability of a scale.[6]

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6. See Menzel (1953) who suggests .65 as the minimum coefficient of scalability.

The second scale (see Tables 2a and 2b) also uses occupations as the index of differentiation for one particular yearę 1960 (*Thailand Population Census, 1960*).

Table 2ae Scale of Occupational Differentiation for 69 Thai Provinces, 1960

Item Content	Proportion of Sample	Number of Item Errors
1 Teacher	1.00	0
2 Dentist	.89	5
3 Insurance or real-estate salesman of securities or services	.87	2
4 Accountant, professional	.70	11
5 Conductor or brakeman, railway	.66	6
6 Longshoreman	.39	7
7 Precision instrument maker or watchmaker	.35	5
8 Compositor or typesetter	.20	3
9 Painter, sculptor or related creative artist	.15	5
10 Sugar or chocolate confectionary maker	.13	2
11 Athlete, sportsman or related worker	.10	1
12 Welder	.08	1
13 Bookbinder	.08	2
14 Stenographer	.04	0

Coefficient of scalability: .71

Source: *Thailand Population Census, 1960.*

Table 2b. Scalogram of Occupational Differentiation for 69 Thai Provinces, 1960

Provinces Grouped by Scale or Error Pattern	Item Content (Corresponding to Items in Table 2a)													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Ubol	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Khonkaen	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Pattani	1	1	1	1	0	1	0	1	1	0	1	1	0	0
Chumporn	1	1	1	1	1	1	1	1	0	1	1	0	0	0
N. Panom	1	1	1	1	0	1	1	1	1	1	0	0	0	0
Udorn	1	1	1	0	1	0	1	1	0	1	0	0	0	0
Pattalung	1	1	1	1	1	1	1	1	0	1	0	0	0	0
Yala	1	1	1	1	1	1	1	1	1	0	0	1	0	0
Nongkhai	1	1	1	1	1	1	1	1	1	0	0	0	1	0
Phuket	1	1	1	1	0	1	1	1	0	0	0	0	0	0
N. Sawan	1	1	1	1	1	1	1	0	0	0	0	0	0	0
N. Sritammarat	1	1	1	1	1	0	1	0	0	0	0	0	0	0
Trang	1	1	1	1	1	1	1	0	0	0	0	0	0	0
Samutsakorn	1	1	1	1	1	0	1	0	0	0	0	0	0	0
Narathiwat	1	1	1	1	1	1	1	0	0	0	1	0	0	0
Suratthani	1	1	1	1	1	1	1	0	0	0	0	0	0	0
Chachoensao	1	1	1	0	1	0	1	0	0	0	0	0	0	0
Chainat	1	1	1	0	1	0	1	0	0	0	0	0	0	0
Chantaburi	1	1	1	1	1	0	1	0	0	1	0	0	0	0
Chiengmai	1	1	1	1	1	1	0	0	0	0	0	0	0	0
Lampang	1	1	1	1	1	1	0	0	0	0	0	0	0	0
Korat	1	1	1	1	1	1	0	0	0	0	0	0	0	0
Phetburi	1	1	1	1	1	1	0	0	0	0	0	0	0	0
Suphanburi	1	1	1	1	1	1	0	0	0	0	0	0	0	0
Srisaket	1	1	1	0	1	1	0	0	0	0	0	0	0	0
Songkhla	1	1	1	1	1	1	0	0	0	0	0	0	0	0
Surin	1	0	1	0	1	1	0	0	0	0	0	0	0	0
Buriram	1	1	1	1	1	1	0	0	0	0	0	0	0	0
Saraburi	1	1	1	0	1	1	0	0	0	0	0	0	0	0
Phichit	1	1	1	1	1	1	0	0	0	0	0	0	0	0
Prajuab	1	1	1	1	1	1	0	0	0	0	0	0	0	0
Ranong	1	1	1	1	0	1	0	0	0	0	0	0	0	0
Chonburi	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Prachinburi	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Pathumthani	1	1	0	1	1	0	0	0	0	0	0	0	0	0
Kanchanaburi	1	1	1	0	1	0	0	0	0	0	0	0	0	0
Ratburi	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Lopburi	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Sukhothai	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Nakorn Pathom	1	1	1	0	1	0	0	1	0	0	0	0	0	0
Angthong	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Rayong	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Pitsanuloke	1	1	1	0	1	0	0	0	0	0	0	0	0	0

Table 2b (continued)

Provinces Grouped by Scale or Error Pattern	Item Content (Corresponding to Items in Table 2a)													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Ayuthaya	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Samutprakarn	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Uttaradit	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Tak	1	1	0	1	1	0	0	0	0	0	0	0	0	0
Phrae	1	1	1	0	1	0	0	0	0	0	0	0	0	0
Chayaphum	1	0	1	1	0	0	1	0	1	0	0	0	0	0
Kalasin	1	1	1	1	0	0	0	0	0	0	0	0	0	0
Roi-et	1	0	1	1	0	0	0	1	0	0	0	0	1	0
S. Nakorn	1	1	1	1	0	0	1	0	0	0	0	0	0	0
Samutsongkhram	1	1	1	1	0	0	0	0	0	0	0	0	0	0
Phang-nga	1	1	1	1	0	0	1	0	0	0	0	0	0	0
Chiengrai	1	1	1	1	0	0	0	0	0	0	0	0	0	0
Singburi	1	1	1	1	0	0	0	0	0	0	0	0	0	0
Uthaithani	1	0	1	1	0	0	0	0	0	0	0	0	0	0
N. Nayok	1	1	1	0	0	0	0	0	0	0	0	0	0	0
Lamphun	1	1	1	0	0	0	0	0	0	0	0	0	0	0
Mahasarakham	1	1	1	0	0	0	0	0	0	0	0	0	0	0
Satun	1	1	1	0	0	0	0	0	1	0	0	0	0	0
Krabi	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Nontaburi	1	1	0	0	1	0	0	0	0	0	0	0	0	0
Petchbun	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Nan	1	1	0	0	0	0	1	0	0	0	0	0	0	0
Trad	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Loey	1	0	0	1	0	0	1	0	1	0	0	0	0	0
Kamphaengphet	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Maehongsorn	1	0	0	0	0	0	0	0	0	0	0	0	0	0

Since we are concerned with an analysis of change over time, a consideration of the 1960 scale in conjunction with the 1947 one is necessary. A comparison of the scales in Tables 1 and 2 indicates that between 1947 and 1960 there has been a general overall increase in differentiation throughout the country and this contention is supported by the following observations:

1. The occupation which appears in both scales, i.e., railroad operator, is present in a higher proportion of provinces in 1960 than in 1947: 66 and 40 per cent respectively.

2. The other occupation which appears in both scales, i.e., welder, unlike railroad operator, is present in a smaller proportion of provinces in 1960 than in 1947:

8 and 97 per cent respectively. However, it can be argued that the welder of 1960 is a much more specialized craftsman than the welder of 1947, and that many of the workers who would have been classed as "welder" in 1947 have been included in the 1960 Census as "craftsmen, production process workers" or "furnacemen, rollers, drawers, moulders and related workers," occupations that were present in all provinces in 1960, and that were not included in the 1947 Census.

3. The presence of actors and musicians in the 1947 scale but not in the 1960 one may be an indication that traditional forms of entertainment became less and less popular in the face of more "modern" types of entertainment such as movies (the absence of movie operators in the 1960 scale is attributed to a census-taking error or the possible inclusion of these movie operators in another occupational category).

4. Occupations in the 1960 scale, such as dentist and insurance salesman seem to be more "sophisticated" in terms of education and other skill qualifications than those of the 1947 scale.

5. Chauffeurs and launderers, both present in 81 per cent of the provinces in 1947, are present in all of the provinces in 1960 and for this reason are not included in the latter scale.

6. Pharmacists and electricians, rather "sophisticated" occupations, appear in the 1947 scale but have not been used in the 1960 one because there were either too many error items when included in the latter or because they failed to discriminate a sufficient number of provinces to warrant their inclusion. However, these occupations occur in the Combined Occupations Scale (Tables 3a and 3b) and it can be seen that they are present in a higher proportion of the provinces in 1960 than in 1947.

We have, then, a comparison of change over time (1947-1960), utilizing two occupational scales (Tables 1 and 2) which are made up of different items, and it has been argued that a general increase in differentiation occurred. The same argument can be made in terms of a single scale (see Tables 3a and 3b) having items common to two time periods, each province appearing twice, once in 1947 and once in 1960. Thus Table 3b shows that the provinces with the high rank levels tend to be predominantly those in 1960; provinces at the lower levels are those in 1947.

Table 3a. Scale of Occupational Differentiation for 69 Thai Provinces, 1947 and 1960

	Item Content	Proportion of Sample	Number of Item Errors
1	Driver of motorized land vehicles-road transport	1.00	2
2	Lawyer	.99	1
3	Fisherman	.98	1
4	Doctor	.97	4
5	Launderer	.95	7
6	Clerical worker	.92	8
7	Electrician	.89	8
8	Telegraph operator	.83	11
9	Cloth dyer	.79	19
10	Metal worker	.71	11
11	Potter	.63	14
12	Toolmaker	.59	10
13	Conductor or brakeman	.48	25
14	Pharmacist	.40	14
15	Chemist	.16	11

Number of cases: 137*

Coefficient of scalability: .68

Source: *Thailand Population Census, 1947* and *Thailand Population Census, 1960*.

* One of the provinces, Kalasin, was created during this time period, and so appears in 1960 and 1966 scales, but is absent from 1947 scales.

Table 3b. Scalogram of Occupational Differentiation for 69 Thai Provinces, 1947 and 1960

Provinces Grouped by Scale or Error Pattern	Item Content (Corresponding to Items in Table 3a)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Kanchanaburi, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Khonkaen, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Chonburi, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Chainat, 1960	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1
N. Pathom, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N. Ratchasima, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N. Srithammarat, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N. Sawan, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Nonthaburi, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Phetburi, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Rayong, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
Ratburi, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lampang, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Loey, 1960	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1
Srisaket, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
Suphanburi, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Surin, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
Ayuthaya, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ayuthaya, 1947	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1
Udon, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Uttaradit, 1960	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1
Ubon, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Chantaburi, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Chachoengsao, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Chonburi, 1947	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0
Chumphon, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Chiangrai, 1960	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0
Chiangmai, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Trang, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Tak, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
N. Nayok, 1960	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0
N. Srithammarat, 1947	1	1	1	1	1	1	1	0	0	1	1	0	1	1	0
N. Sawan, 1947	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0
Nonthaburi, 1947	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0
Nongkhai, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Prachinburi, 1960	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0
Phangenga, 1960	1	1	1	1	1	1	1	1	0	1	1	1	0	1	0
Phichit, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Phitsanulok, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Phitsanulok, 1947	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0
Phuket, 1960	1	1	1	1	1	1	1	1	0	1	1	1	0	1	0
Lopburi, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0

Table 3b (continued)

Provinces Grouped by Scale or Error Pattern	Item Content (Corresponding to Items in Table 3a)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Lopburi, 1947	1	1	1	1	1	1	1	1	0	1	0	0	1	1	0
Lampang, 1947	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Lamphun, 1960	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0
Songkhla, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Songkhla, 1947	1	1	1	1	1	1	1	1	0	1	0	1	1	1	0
S. Prakan, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
S. Songkhram, 1960	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0
S. Sakhon, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Saraburi, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Sukhothai, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Suratthani, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Angthong, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Uthaithani, 1960	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0
N. Ratchasima, 1947	1	1	1	1	1	1	1	1	1	0	1	1	1	0	0
Narathiwat, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
Buriram, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
Pathumthani, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
Pathumthani, 1947	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0
Prachuap, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
Phathalung, 1960	1	1	1	1	1	1	1	1	0	1	1	1	1	0	0
Phetburi, 1947	1	1	1	1	1	1	1	0	1	0	1	0	1	0	0
Phrae, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
Yala, 1960	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
Ratburi, 1947	1	1	1	1	1	1	1	1	1	0	1	0	1	0	0
Krabi, 1960	1	1	1	1	1	1	1	1	0	1	1	1	0	0	0
Kalasin, 1960	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
Kamphaengphet, 1960	1	1	1	1	1	1	1	1	0	1	1	1	0	0	0
Chayaphum, 1960	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1
Trat, 1960	1	1	1	1	1	1	0	1	1	1	0	1	0	0	0
N. Phanom, 1960	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
Nan, 1960	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1
Phetchabun, 1960	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0
Mahasarakham, 1960	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
Maehongson, 1960	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
Roi-et, 1960	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
Ranong, 1960	1	1	1	1	1	1	1	1	0	1	1	1	0	0	0
S. Nakhon, 1960	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1
Satun, 1960	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
Singburi, 1960	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
Chiangrai, 1947	1	0	0	1	1	1	1	1	0	1	1	0	0	0	0
Prachinburi, 1947	0	1	1	1	1	1	1	1	1	0	1	0	0	1	0
Pattani, 1960	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
Roi-et, 1947	1	1	1	1	1	0	0	1	1	0	1	0	0	0	1

Table 3b (continued)

Provinces Grouped by Scale or Error Pattern	Item Content (Corresponding to Items in Table 3a)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Sukhothai, 1947	1	1	1	1	1	1	0	1	1	1	1	0	0	0	0
Chantaburi, 1947	1	1	1	1	1	1	1	0	1	1	0	0	0	0	0
Chumphon, 1947	1	1	1	1	1	1	1	1	0	1	0	0	1	0	0
Chiangmai, 1947	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0
Trang, 1947	1	1	1	1	1	1	1	1	0	1	0	0	0	1	1
Nongkhai, 1947	1	1	1	1	0	0	1	0	1	1	0	0	0	0	0
Phang-nga, 1947	1	1	1	1	1	0	1	1	1	1	0	0	0	0	0
Phrae, 1947	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0
Phuket, 1947	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0
S. Nakhon, 1947	1	1	1	1	1	1	0	0	1	1	0	0	0	1	0
S. Prakan, 1947	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0
Ubon, 1947	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0
Chachoengsao, 1947	1	1	1	1	1	1	1	1	1	0	0	0	0	1	0
N. Nayok, 1947	1	1	1	1	1	1	1	0	1	0	0	0	1	1	0
N. Pathom, 1947	1	1	1	1	1	1	1	1	1	0	0	0	1	1	0
N. Phanom, 1947	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0
Pattani, 1947	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0
Phichit, 1947	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
S. Sakhon, 1947	1	1	1	1	1	1	1	1	1	0	0	0	1	0	0
Saraburi, 1947	1	1	1	1	0	1	0	1	1	0	0	0	1	1	0
Singburi, 1947	1	1	1	0	1	0	1	1	1	0	0	0	0	0	1
Suphanburi, 1947	1	1	1	1	1	1	1	0	1	0	0	0	0	1	0
Uttaradit, 1947	1	1	1	1	0	1	1	1	1	0	0	0	1	0	1
Chayaphum, 1947	1	1	1	1	0	1	0	1	0	0	0	0	0	0	0
Trat, 1947	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0
Narathiwat, 1947	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
Phetchabun, 1947	1	1	1	1	0	1	0	1	0	0	0	0	0	0	0
Rayong, 1947	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0
Udon, 1947	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0
Kanchanaburi, 1947	1	1	1	1	1	1	1	0	0	0	0	1	1	0	1
Khonkaen, 1947	1	1	1	1	1	1	1	0	0	0	1	0	1	1	0
Tak, 1947	1	1	1	1	1	0	1	0	0	0	1	0	0	0	0
Prachuap, 1947	1	1	1	1	1	0	1	0	0	0	0	0	1	0	0
Mahasarakham, 1947	1	1	1	1	1	1	1	0	0	0	1	1	0	0	0
Yala, 1947	1	1	1	1	1	1	1	0	0	0	0	0	1	0	0
Ranong, 1947	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0
Suratthani, 1947	1	1	1	1	1	0	1	0	0	1	0	0	1	0	0
Chainat, 1947	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1
Nan, 1947	1	1	1	1	1	1	0	0	1	0	0	0	0	0	1
Phathalung, 1947	1	1	1	1	0	1	0	0	0	0	1	0	0	0	0
Satun, 1947	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0
Krabi, 1947	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0
Lamphun, 1947	1	1	1	0	1	0	0	0	1	1	0	0	0	0	0

Table 3b (continued)

Provinces Grouped by Scale or Error Pattern	Item Content (Corresponding to Items in Table 3a)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
S. Songkhram, 1947	1	1	1	1	1	0	0	0	1	1	0	0	0	0	0
Angthong, 1947	1	1	1	1	1	0	0	0	1	1	0	0	1	0	1
Uthaithani, 1947	1	1	1	1	1	0	0	0	1	0	0	0	0	1	0
Kamphaengphet, 1947	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
Buriramę 1947	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
Surin, 1947	1	1	1	1	0	0	0	1	0	0	0	0	1	0	0
Srisaket, 1947	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0
Maehongson, 1947	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0
Loeyę 1947	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0

Table 3c. Rearrangement* of Table 3b.

Province	Year	Item Content (Corresponding to Items in Table 3a)														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Krabi	1960	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
	1947	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0
Kanchanaburi	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1947	1	1	1	1	1	1	1	0	0	0	0	1	1	0	1
Kalasin	1960	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
	1947	(Not yet in existence)														
Kamphaengphet	1960	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
	1947	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
Khonkaen	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1947	1	1	1	1	1	1	1	0	0	0	1	0	1	1	0
Chantaburi	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
	1947	1	1	1	1	1	1	1	0	1	1	0	0	0	0	0
Chachoengsao	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
	1947	1	1	1	1	1	1	1	1	1	0	0	0	0	1	0
Chonburi	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1947	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0

* This rearrangement facilitates the examination of the increase in occupational differentiation of each province between 1947 and 1960.

Table 3c (continued)

Province	Year	Item Content (Corresponding to Items in Table 3a)														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Chainat	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1947	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1
Chayaphum	1960	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1
	1947	1	1	1	1	1	1	1	1	0	1	0	0	1	0	0
Chumporn	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
	1947	1	1	1	1	1	1	1	1	0	1	0	0	1	0	0
Chiangrai	1960	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0
	1947	1	0	0	1	1	1	1	1	0	1	1	0	0	0	0
Chiangmai	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
	1947	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0
Trang	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
	1947	1	1	1	1	1	1	1	1	0	1	0	0	0	1	0
Trat	1960	1	1	1	1	1	1	0	1	1	1	0	1	0	0	0
	1947	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0
Tak	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1947	1	1	1	1	1	0	1	0	0	0	1	0	0	0	0
Nakhon Nayok	1960	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0
	1947	1	1	1	1	1	1	1	0	1	0	0	0	1	1	0
Nakhon Pathom	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1947	1	1	1	1	1	1	1	1	1	0	0	0	1	1	0
Nakhon Phanom	1960	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
	1947	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0
N. Ratchasima	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1947	1	1	1	1	1	1	1	1	1	0	1	1	1	0	0
N. Srithammarat	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1947	1	1	1	1	1	1	1	0	0	1	1	0	1	1	0
Nakhon Sawan	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1947	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0
Nonthaburi	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1947	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0
Narathiwat	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
	1947	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
Nan	1960	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1
	1947	1	1	1	1	1	1	0	0	1	0	0	0	0	0	1
Nongkhai	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
	1947	1	1	1	1	0	0	1	0	1	1	0	0	0	0	0

Table 3c (continued)

Province	Year	Item Content (Corresponding to Items in Table 3a)														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Buriram	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
	1947	1	1	1	1	0	0	0	0	0	0	0	0	1	0	0
Pathumthani	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
	1947	1	1	1	1	1	1	1	1	1	1	1	C	1	0	0
Prachuap	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
	1947	1	1	1	1	1	0	1	0	0	0	0	0	1	0	0
Prachinburi	1960	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0
	1947	0	1	1	1	1	1	1	1	1	0	1	0	0	1	0
Pattani	1960	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
	1947	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0
Phang-nga	1960	1	1	1	1	1	1	1	1	0	1	1	1	0	1	0
	1947	1	1	1	1	1	0	1	1	1	1	0	0	0	0	0
Phathalung	1960	1	1	1	1	1	1	1	1	0	1	1	1	1	0	0
	1947	1	1	1	1	0	1	0	0	0	0	1	0	0	0	0
Phichit	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	0	
	1947	1	1	1	1	1	1	1	1	1	0	0	0	0	0	
Phitsanulok	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	0	
	1947	1	1	1	1	1	1	1	1	1	1	0	1	1	0	
Phetchabun	1960	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0
	1947	1	1	1	1	0	1	0	1	0	0	0	0	0	0	0
Phetburi	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1947	1	1	1	1	1	1	1	0	1	0	1	0	1	0	
Phrae	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
	1947	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0
Phuket	1960	1	1	1	1	1	1	1	1	0	1	1	1	0	1	0
	1947	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0
Mahasarakham	1960	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
	1947	1	1	1	1	1	1	1	0	0	0	1	1	0	0	0
Maehongson	1960	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
	1947	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0
Yala	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
	1947	1	1	1	1	1	1	1	0	0	0	0	0	1	0	0
Roi-Et	1960	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
	1947	1	1	1	1	1	0	0	1	1	0	1	0	0	0	1
Ranong	1960	1	1	1	1	1	1	1	1	0	1	1	1	0	0	0
	1947	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0

Table 3c (continued)

Province	Year	Item Content (Corresponding to Items in Table 3a)														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Rayong	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
	1947	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0
Ratburi	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1947	1	1	1	1	1	1	1	1	1	0	1	0	1	0	0
Lopburi	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
	1947	1	1	1	1	1	1	1	1	0	1	0	0	1	1	0
Lampang	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1947	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Lamphun	1960	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0
	1947	1	1	1	0	1	0	0	0	1	1	0	0	0	0	0
Loey	1960	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1
	1947	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Srisaket	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
	1947	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0
Sakon Nakhon	1960	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1
	1947	1	1	1	1	1	1	0	0	1	1	0	0	0	1	0
Songkhla	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
	1947	1	1	1	1	1	1	1	1	0	1	0	1	1	1	0
Satun	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
	1947	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0
Samut Prakan	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
	1947	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0
Samut Songkhram	1960	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0
	1947	1	1	1	1	1	0	0	0	1	1	0	0	0	0	0
Samut Sakhon	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
	1947	1	1	1	1	1	1	1	1	1	0	0	0	1	0	0
Saraburi	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
	1947	1	1	1	1	0	1	0	1	1	0	0	0	1	1	0
Singburi	1960	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
	1947	1	1	1	0	1	0	1	1	1	0	0	0	0	0	1
Sukhothai	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
	1947	1	1	1	1	1	1	0	1	1	1	1	0	0	0	0
Suphanburi	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1947	1	1	1	1	1	1	1	0	1	0	0	0	0	1	0
Suratthani	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
	1947	1	1	1	1	1	0	1	0	0	1	0	0	1	0	0

Table 3c (continued)

Province	Year	Item Content (Corresponding to Items in Table 3a)														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Surin	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
	1947	1	1	1	1	0	0	0	1	0	0	0	0	1	0	0
Ayuthaya	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1947	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1
Angthong	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
	1947	1	1	1	1	1	0	0	0	1	1	0	0	1	0	1
Udon	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1947	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0
Uttaradit	1960	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1
	1947	1	1	1	1	0	1	1	1	1	0	0	0	1	0	1
Uthaithani	1960	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0
	1947	1	1	1	1	1	0	0	0	1	0	0	0	0	1	0
Ubon	1960	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1947	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0

Furthermore, this scale allows one to see whether or not particular provinces elaborated their structures during that time period, that is, whether new occupations were gained and hence whether the province moved up in rank,[7] e.g., Nakhon Pathom and Buriram which increased their ranks from 9th to 15th and from 4th to 13th respectively; whether "consolidation" took place, that is, "errors" were "filled in," e.g., Pathumthani and Songkhla whose rank levels did not increase but whose errors were "filled in"; or whether both types of phenomena occurred, e.g., Chayaphum and Saraburi which increased their ranks from 8th to 12th and from 9th to 14th respectively, but also "filled in" two errors each.

Several scales of structural differentiation were constructed and their reliability was established. That is, rankings were made on different institutions--occupations, banks, theaters, etc.--and all gave essentially the same results, thus confirming the already established finding that social systems differentiate simultaneously and to a similar degree in all spheres of social activity. Moreover, scales were constructed for the periods 1947, 1960 and 1966 to enable the examination of the process of development.

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7. See Table 3c in which the scale has been rearranged to permit one more easily to compare each province in 1947 and 1960.

For 1960, data were available to make the following scales: Banks only[8] (Table 4); Occupations[9] (Table 2); and Occupations and Banks (Table 5). For 1966, data permitted the construction of the following scales: Banks only[10] (Table 6); Banks, Theaters,[11] Hotels,[12] Newspapers,[13] Airports[14] and Young Buddhist Associations[15] (Table 7); and banks common to the 1960 and 1966 time periods (Table 8), a scale which permitsean examination of the change in rank of provinces in that scale over the time period, as was done for common occupations in the 1947-1960 time periods (see discussion of Table 3 above). The coefficienteof scalability for each of these six scales and the two others using 1947 data was above the acceptable .65 level.

Briefly, with regard to the scales, several things should be noted:

1. The Banks and Occupations, 1960, scale does not have all the items of the separate scales. While all items should be accounted for, and given time and space the elimination of each item could be explained here the purpose is mainly to demonstrate and make concrete the theoretical contention that differentiation or development is systemic and that social, economic and political indices may be considered interchangeable so that whichever indices are chosen to construct a scale a consistent ranking of provinces will emerge.

2. Items 2 and 3 of the Bank, 1960, scale each consist of two banks which may be considered functionally alternate institutions at that particular level of differentiation and at that particular period. It appears that at ranks 2 and 3 provinces in 1960 tended to have

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8. Department of Commercial Intelligence, *Commercial Directory of Thailand* (1959-60), Sec. 6.

9. *Thailand Population Census, 1960.*

10. *Thailand Year Book* 1966-67 (2nd ed.), Sec. C; and *The Siam Directory*, BE 2509-10 (1966-67), Sec. D.

11. *Ibid.*, Sec. E: 25-27 and Sec. C respectively.

12. *Ibid.*, Sec. E: 60-61, and Sec. F: 69, 70, 73, respectively.

13. *Ibid.*, Sec. G: 138-149, and Sec. B: 91, 93, respectively.

14. *Thailand Year Book* 1966-67 (2nd ed.), Sec. C: 260.

15. *Ibid.*, Sec. D: 140-143.

Table 4. Scale of Differentiation of Banks for 69 Thai Provinces, 1960

	Item Content	Proportion of Sample	Number of Item Errors
1	Government Savings Bank	1.00	0
2	Siam City Bank or Agricultural Bank	.67	4
3	Bangkok Bank of Commerce or Thai Farmers Bank	.35	1
4	The Provincial Bank	.19	6
5	Siam Commercial Bank	.14	1
6	Bank of Ayuthaya	.07	5
7	Bangkok Bank	.06	3
8	Bank of Asia for Industry and Commerce	.03	2

Number of cases: 69

Coefficient of scalability: .74

Provinces discriminated by each of the above scale steps are as follows:

8 Songkhla, Chonburi

7 Chiangmai, Lampang

6 N. Ratchasima

5 N. Srithammarat, Trang, N. Sawan, Phetburi, Chiangrai

4 Phuket, N. Pathom, Suratthani

3 Chumphum, Yala, Udon, Khonkaen, S. Sakhon, Chachoengsao, Phitsanulok, Ratburi, Phrae, Ranong, Lamphun

2 Phathalung, Nongkhai, Narathiwat, Phang-nga, Chayaphum, Chantaburi, Pattani, Surin, Phichit, Saraburi, Suphanburi, Tak, Kanchanaburi, Prachinburi, Rayong, Lopburi, S. Songkhram, S. Prakan, Uthaithani, Krabi, Satun, Phetchabun

1 N. Phanom, Ubon, Buriram, Srisaket, Prachuap, Sukhothai, Uttaradit, Chainat, Pathumthani, Ayuthaya, Angthong, Kalasin, Roi-et, S. Nakhon, Singburi, Mahasarakham, N. Nayok, Nan, Trat, Nonthaburi, Loey, Kamphaengphet, Maehongson

Source: *Commercial Directory for Thailand, 1959-1960.*

Table 5. Scale of Differentiation of Banks and Occupations for 69 Thai Provinces, 1960

	Item Content	Proportion of Sample	Number of Item Errors
1	Teacher	1.00	0
2	Government Savings Bank	1.00	0
3	Dentist	.96	5
4	Insurance salesman	.90	2
5	Siam City Bank or Agricultural Bank	.67	4
6	Bangkok Bank of Commerce or the Thai Farmers Bank	.38	3
7	Compositors	.22	9
8	Provincial Bank	.12	3
10	Siam Commercial	.09	5
10	Bank of Asia for Industry and Commerce	.04	1

Coefficient of scalability: .69

Provinces discriminated by each of the above scale steps are as follows:

10 Chonburi, N. Srithammarat, Songkhla

8 Trang, N. Sawan, Phetburi

7 N. Pathon, Phuket

6 Khonkaen, Chumphon, Nongkhai, Pattani, Phathalung, Yala, Udon

5 Chachoengsao, Chiangrai, Chiangmai, N. Ratchasima, Phitsanulok, Phrae, Ranong, Ratburi, Lampang, Lamphun, S. Sakhon

4 Krabi, Kanchanaburi, Chantaburi, Chayaphum, Tak, Narathiwat, Prachinburi, Phang-nga, Phichit, Phetchabun, Rayong, Lopburi, Satun, S. Prakan, S. Songkhram, Saraburi, Suphanburi, Surathani, Surin, Uthaithani

3 Kalasin, Chainat, N. Nayok, N. Phanom, Buriramę Prachuap, Mahasarakham, Roi-et, Srisaket, S. Nakhon, Singburi, Sukhothai, Ayuthaya, Angthong, Uttaradit, Ubon

2 Trat, Nonthaburi, Nan, Pathumthani

1 Kamphaengphet, Maehongson, Loey

Sources: *Thailand Population Census, 1960* and *Commercial Directory for Thailand, 1959-1960.*

Table 6. Scale of Differentiation of Banks for 69 Provinces, 1966

	Item Content	Proportion of Sample	Number of Item Errors
2	Government Savings Bank	1.00	0
2	Agricultural Bank	.88	12
3	Bangkok Bank of Commerce	.65	6
4	Thai Development Bank	.41	11
5	Thai Farmers Bank	.23	7
6	Siam Commercial Bank	.13	4
7	Bank of Asia for Industry and Commerce	.07	0
8	Banque de 1'Indochine	.07	0

Coefficient of scalability: .66

Provinces discriminated by each of the above scale steps are as follows:

8 Chonburi, N. Ratchasima, N. Srithammarat, Yala, Songkhla

7 Khonkaen, Chiangmai, N. Sawan, Udon

6 Chachoengsao, Chumphon, Trang, Nan, Phitsanulok, Phrae, Phuket

5 Chantaburi, Chayaphum, N. Pathom, Nonthaburi, Narathiwat, Buriram, Phichit, Ranong, Ratburi, S. Prakan, Uttaradit, Uthaithani

4 Chiangrai, Trat, N. Phanom, Nongkhai, Prachuap, Phetchabun, Phetburi, Rayong, Lampang, Lamphun, S. Songkhram, S. Sakhon, Saraburi, Sukhothai, Suphanburi, Surin, Ayuthaya

3 Kalasin, Chainat, Tak, N. Nayok, Prachinburi, Pattani, Phathae lung, Mahasarakham, Roi-et, Lopburi, S. Nakhon, Satun, Singburi, Suratthani, Angthong, Ubon

2 Krabi, Kanchanaburi, Kamphaengphet, Pathumthani, Phangenga, Maehongson, Loey, Srisaket

Source: *Siam Directory, 1966-67* and *Thailand Yearbook, 1966-67*.

Table 7. Scale of Differentiation of Banks and Other Institue tions for 69 Thai Provinces, 1966

	Item Content	Proportion of Sample	Number of Item Errors
2	Government Savings Bank	1.00	0
2	Theatre	.84	10
3	Hotel	.75	8
4	Bangkok Bank of Commerce	.57	10
5	Newspaper	.38	9
6	Airport	.29	6
7	Bangkok Bank	.23	6
8	Siam Commercial Bank	.14	1
9	Bank of Asia for Industry and Commerce	.06	1
10	Banque de l'Indochine	.06	1

Coefficient of scalability: .65

Provinces discriminated by each of the above scale steps are as follows:

10 Songkhla, Chonburi, N. Ratchasima, Yala

9 Lampang, Chiangmai, Udon, Khonkaen, Chiangrai, N. Sawan

8 Trang, Pattani, Ubon, Phuket, Phitsanulok, Saraburi

7 Prachuap, Phrae, N. Phanom, Nongkhai

6 Suratthani, Lopburi, Uttaradit, N. Pathom, Sukhothai, Ratburi

5 N. Srithammarat, Chumphon, Chantaburi, Ranong, Phichit, Buri-ram, Suphanburi, Rayong, Ayuthaya, Phetburi, Surin, Phetcha-bun, Trat

4 Chachoengsao, Narathiwat, Kanchanaburi, Prachinburi, Tak, Roi-et, Chainat, Kalasin, Kamphaengphet, Srisaket, N. Nayok, Krabi, Loey

3 Phathalung, Uthaithani, Phang-nga, Satun, S. Nakhon, Chaya-phum

2 S. Prakan, Nonthaburi, Lamphun, S. Songkhram, Singburi, Ang-thong, Mahasarakham, S. Sakhon, Nan, Maehongson, Pathumthani

Sources: *Siam Directory, 1966-67* and *Thailand Year Book, 1966.*

Table 8. Scale of Differentiation of Banks for 69 Thai Provinces, 1960 and 1966

	Item Content	Proportion of Sample	Number of Item Errors
1	Government Savings Bank	1.00	0
2	Siam City Bank	.61	21
3	Bangkok Bank of Commerce	.45	9
4	Thai Farmers Bank	.25	18
5	Siam Commercial Bank	.17	4
6	Bangkok Bank	.12	11
7	Bank of Asia for Industry and Commerce	.05	2

Number of cases: 138 Coefficient of scalability: .67

Provinces discriminated by each of the above scale steps are as follows:

7 Chonburi, 1960, 1966; Nakhon Ratchasima, 1966; Nakhon Srithammarat, 1960; Yala, 1966; Songkhala, 1960, 1966

6 Khonkhaen, 1966; Chiangrai, 1966; Chiangmai, 1960, 1966; Trang, 1966; Phitsanulok, 1966; Phuket, 1966; Lampang, 1960, 1966

5 Chiangrai, 1960; Trang, 1960; Nakhon Ratchasima, 1960; Nakhon Sawan, 1960, 1966; Phetburi, 1960, 1966; Udon, 1966

4 Khonkaen, 1960; Chumphon, 1960, 1966; Nakhon Srithammarat, 1966; Nan, 1966; Phang-nga, 1966; Phrae, 1966; Lopburi, 1966; Suratthani, 1966; Udon, 1960

3 Chantaburi, 1966; Trat, 1966; Nakhon Pathom, 1960, 1966; Nakhon Phanom, 1966; Nonthaburi, 1966; Nongkhai, 1966; Buriram, 1966; Prachuap, 1966; Phichit, 1966; Phetchabun, 1966; Yala, 1960; Ranong, 1960, 1966; Rayong, 1966; Ratburi, 1960, 1966; Lamphun, 1960, 1966; Samut Songkhram, 1966; Samut Sakhon, 1960, 1966; Saraburi, 1966; Sukhothai, 1966; Suphanburi, 1966; Surin, 1966; Ayuthaya, 1966; Uttaradit, 1966

2 Krabi, 1960, 1966; Kanchanaburi, 1960, 1966; Chantaburi, 1960; Tak, 1960, 1966; Narathiwat, 1960, 1966; Prachinburi, 1960, 1966; Pattani, 1960, 1966; Phang-nga, 1960; Phathalung, 1960, 1966; Rayong, 1960; Lopburi, 1960; Samut Songkhram, 1960; Saraburi, 1960; Suphanburi, 1960; Suratthani, 1960

1 Kalasin, 1960, 1966; Kamphaengphet, 1960, 1966; Chachoengsao, 1960, 1966; Chainat, 1960, 1966; Chayaphum, 1960, 1966; Trat, 1960; N. Nayok, 1960, 1966; N. Phanom, 1960; Nonthaburi, 1960; Nan, 1960; Nongkhai, 1960; Buriram, 1960; Pathumthani, 1960, 1966; Prachuap, 1960; Phichit, 1960; Phitsanulok, 1960; Phetchabun, 1960; Phrae, 1960; Phuket, 1960; Mahasarakham, 1960, 1966; Maehongson, 1960, 1966; Roi-et, 1960, 1966; Loey, 1960, 1966; Srisaket, 1960, 1966; S. Nakhon, 1960, 1966; Satun, 1960, 1966; S. Prakan, 1960, 1966; Singburi, 1960, 1966; Sukhothai, 1960; Surin, 1960; Ayuthaya, 1960; Angthong, 1960, 1966; Uttaradit, 1960; Uthaithani, 1960, 1966; Ubon, 1960, 1966

Sources: *Commercial Directory for Thailand, 1959-1960* and *Siam Directory, 1966-67.*

either one of the banks in a random pattern. This probably indicates that at such a relatively low level of structural differentiation either a commercial bank or an agricultural bank could handle the financial business of the province. The twoebanks combined into item 2 are the Agricultural Bank, Ltde and the Siam City Bank, Ltd. while item 3 consists of the Thai Farmers Bank, Ltd. and the Bangkok Bank of Commerce, Ltd. Another alternative explanation is that these banks, as they began to expand in the late fifties, may have "divided up" the nation among them so that one tended to find only one of the banks in each province.

3. Although it was possible to constructe scales that included a variety of institutions (banks, occupations, theaters, cultural associations, airports, etc.), thus indicating that they all tap the one dimension of structural differentiation, certain indices appear to be more stable or more reliable than others. Thus, although the presence of a variety of occupations is a structural indexe[16] it is still associated with individuals in a way that institutions such as banks are not. Hence occupations are possibly less reliable than such more publicly discriminated and immobile institutions as banks and associations. Moreover, the fact that the occupations scales draw their data from the much maligned censuses may lessen their reliabilitye[17]

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16. Its use here is merely an elaboration of the commonly held belief that if a town has, for example, a doctor, it is generally more "developed" than a town of the same size that does not possess such an institutionalized role.

17e While the reliability of Thai censuses, and especially the Census of 1947, has been questioned, we are concerned here only with the presence or absence of at least one person of a particular occupatione Thus, while one might feel unsure of relying on there being exactly seventeen electricians in a particular province in a particular Census, one would feel more confident in saying there was at least one electrician in the province. With this approach, even suspect data can be used because not very much is asked of theme In addition, if the data are completely false, there will be no cumulative, unidimensional pattern underlying theme Furthermore, if there is an error in the data, e.g., there was an electrician though none was recorded, this will probably appear as an "error" in the scale. If there are not too many such omissions, the scale will be largely unaffectede (See, e.g., Saraburi in Table 1b where an electrician was probably missed by the Census taker.)

4. All of the institutions, i.e.g banks, newspapers, hotels, etc., used as indices are those present in the respective provinces and to assume that they all occur in the provincial capitals would be a mistake: for some provinces the coded institution was present in a district and not in the provincial capital; for some provinces more than one of the same institutions were present. However, the construction of a Guttman scale requires the presence of only one of each relevant institution which means that whether a province has three newspapers or one, the institution of "newspapers" is coded present (and appears as a "1" in the scalograms)e. The theoretical rationale underlying this is that the ability of a province to incorporate one such institution signifies that a certain level of differentiation has been reached, in much the same way as the indigenous production of an atomic bomb by a nation intuitively conveys something about the level of development of that nation. Furthermore, it is assumed that when a province has, for example, one agricultural bank, it is at the same level of differentiation as a province with three agricultural banks; an increase in the number of the same type of institution merely indicates the volume of the activity engaged in, not the diversity of activities.

5. It is maintained that the cumulative pattern shown by the Guttman scales measures the level of "development" of the provinces. Many other studies have shown that these scales correlate closely with conventional measures of development (see the studies cited above) and indeed, because of their structural nature, the scales are a more direct measure of the level of structural development than are measures that rely on aggregative data dealing with the subunits of the system being examined, for example, per capita income or farm productivity. However, even if one prefers aggregative data, there is no real choice in studies of much of the underdeveloped world where many such aggregative statistics are either non-existent or highly suspecte.

Much of the discussion of this paper relies upon the scales which makes it imperative that their credentials be in good order. Table 9 is a tau correlation matrix of the three time periods. Since the Guttman scale is an ordinal measure, tau--a rank correlation measuree-seems the most appropriate correlational device; it should be remembered that tau has a numerically lower coefficient for what might be an equivalently strong Pearsonian r correlation. The concern here is with the intercorrelations or scales of the same time periods so as to establish that approximately the same ranking appears for one time

Table 9. Rank Correlation Matrices of Structural Differentiation, 1947, 1960, and 1966

1947 Measures

		1	2
1	Combined Occupation, 1947 (Table 3)	x	.43†
2	Occupations, 1947 (Table 1)		x

1960 Measures

		1	2	3	4	5
1	Combined Occupation, 1960 (Table 3)	x	.23†	.25†	.18*	.23†
2	Banks, 1960 (Table 4)		x	.75†	.85†	.33†
3	Combined Banks, 1960 (Table 8)			x	.70†	.33†
4	Banks and Occupations, 1960 (Table 5)				x	.46†
5	Occupations, 1960 (Table 2)					x

1966 Measures

		1	2	3
1	Banks, 1966 (Table 6)	x	.55†	.40†
2	Combined Banks, 1966 (Table 8)		x	.60†
3	Banks and Other Institutions, 1966 (Table 7)			x

* Significant at the .05 level.

† Significant at the .01 level

period no matter which indices are used. An examination of the matrix reveals that all the coefficients except one are significant at the .01 level. The one that is significant only at the .05 level is the correlation of the Combined Occupation, 1960, and Banks and Occupations, 1960 scales. It is of interest to note that this and the other relatively low coefficients deal with occupation scales and this tends to bear out the observation made above regarding the possibly lower reliability of occupations as an index. In addition, the varying intercorrelations may be due to the different distributions of cases in the different scales. An examination of the cumulative percentages indicates that some of the scales discriminate finely at the lower end and group the more differentiated provinces together at the top; some do vice versa.[18]

Thus, we may conclude that despite the difference in institutional sectors--banks, theaters, newspapers, airports, occupations, hotels, organizations--there are basic rankings of provinces that emerge for each time period, and it is upon these rankings that we shall base our analysis.

Correlates of Structural Differentiation

To substantiate the earlier contention that if differentiation were truly structural it should manifest itself through measures other than the Guttman scales, the following correlates were tested.

Number of Districts

The province is composed of districts, each one of which constitutes a subsystem and which has interests and demands that must be dealt with by the provincial system. Thus, one might consider a province with more districts to have a more differentiated structure--a structure with many interrelated parts and one in which a proliferation of interests rather than a monolithic unit prevails. The hypothesized positive relationship between number of districts and structural differentiation was supported by the following correlations: number of districts in 1960 correlated positively with the Banks, 1960 scale at .19* (tau), with the Occupation, 1960 scale at .25† and with the Combined Occupation and Bank, 1960 scale at .14. While some of this relationship may be due to larger and more populous provinces having more districts this does not explain the whole correlation, for there is not a perfect relationship between

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18. We are indebted to Carol Owen for this suggestion.

number of districts and population or areae Area correlates with number of districts in 1960 at .40† while population correlates with number of districts at .59†.[19] However, here one might well ask what role population plays in development.

Population and Size

Do numbers cause or reflect development? If it is a cause or reflection of development then India should be well on the way to economic take-off. Or are people merely attracted to those places that are already growing economically, in the way that a boom town grows? These are questions that can only be touched on in this paper. Population size does correlate with differentiation rank, but not as highly as some might expect. Population in 1960 correlates .16* with the Bank, 1960 scale, .13 with the Bank and Occupation, 1960 scale, and .21† with the Occupation, 1960 scale. These correlations are not particularly high and this indicates that one can easily have the case of two provinces with the same population but with one having much more differentiated economic, social, educational, etc., sectors of public life than the other. With this in mind, one can see why a structural approach is stressed here and measures that involve the aggregation of subunits avoided. The relationship to the larger unit of aggregate measures, such as population, is both indirect and problematic. The further study of this relationship, pertinent though it is to conventional studies of development, must be left to a later study.

Number of Municipalities[20]

Returning to the examination of structural correlates of differentiation, an analegous argument to that made for taking the number of districts as a measure of differentiation could be made for regarding the number of municipalities in the same light. Several municipalities spread throughout a province might be regarded as evidence that the provincial structure was one in which a variety of viewpoints--emanating from different centers, each with its own interests--were being dealt with.

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19. Since area, number of districts and population are all interval data, the Pearsonian r is also appropriate and these two correlations using r, are .61† and .78†, respectively, thus showing that numerically lower correlation coefficients are obtained from the same data when tau is used.

20. Municipalities are established on the basis of population, revenues collected, and whether or not a town is an administrative seat.

The number of municipalities in 1960 (*Thailand Population Census, 1960*) correlates at .28† with the Banks, 1960 scale, at .23† with the Banks and Occupations, 1960 scale, and at .26† with the Occupations, 1960 scale.

Percentage of Population in Agriculture

A final, though crude, correlate of structural differentiation is percentage of population employed in agriculture. A more differentiated structure should have fewer people employed in agriculture and a greater proportion of people employed in other occupations and activities. Percentage of people employed in agriculture (*Thailand Population Census, 1960*), as predicted, correlates negatively with the Banks, 1960 scale at -.23†, with the Banks and Occupations, 1960 scale at -.17*, and with the Occupations, 1960 scale at -.04. That the latter correlation is not very strong may be attributed to the above-mentioned reservations as to the reliability of occupations as a structural measure when compared to more "permanent" and more publicly discriminated institutions such as banks.

Relative Rates of Structural Growth

The relative rates of provincial structural growth were quantified by measuring relative change in scale rank in the following manner. Two scales were taken, each from a different time period, for example 1947 and 1960. Then provinces on the same scale step in 1947 were compared to determine their positions on the 1960 scale relative to one another. The modal behavior was established by determining where the majority of provinces ended up on the 1960 scale and all of these were given a score of "3", midway between 1 and 5. Then those provinces that ranked higher than the modal pattern were divided into two equal parts, the high half being given a score of "5", the lower half a score of "4". For those that fell below the modal pattern, the same procedure was taken. Those that ended up on the 1960 scale at a point below the mode were divided into those which differentiated at a very slow rate and were scored "1," and those which differentiated at a less slow rate and were scored "2". Then the scores on all pairs of scales were summed, a procedure that averages the differentially sensitive scales. This technique controls for the previous position of a province. The scores listed in Table 10 were obtained by combining the growth rates from each of the 1947 scales to each of the 1960 ones, and each of the 1960 scales to each of the 1966 ones.

Table 10. Scores of the 69 Provinces for 1947→1960 and 1960→1966, Based on the 8 Scales*

Province	Total Score 1947→1960	Total Score 1960→1966
Krabi, S	29	37
Kanchanaburi, C	34	28
Kalasin, NE	-†	45
Kamphaengphet, N	24	34
Khonkaen, NE	37	58
Chantaburi, C	29	51
Chachoengsao, C	33	41
Chonburi, C	39	73
Chainat, C	34	36
Chayaphum, NE	32	46
Chumphon, S	36	42
Chiangrai, N	37	59
Chiangmai, N	36	62
Trang, S	42	58
Trat, C	23	55
Tak, N	28	33
Nakhon Nayok, C	21	41
Nakhon Pathom, C	40	45
Nakhon Phanom, NE	24	60
Nakhon Ratchasima, NE	35	74
Nakhon Srithammarat, S	35	52
Nakhon Sawan, N	30	62
Nonthaburi, C	13	46
Narathiwat, S	33	41
Nan, N	19	56
Nongkhai, NE	33	47
Buriram, NE	29	55
Pathumthani, C	21	24
Prachuap, C	25	56
Prachinburi, C	31	33
Pattani, S	34	42
Phang-nga, S	29	37
Phathalung, S	40	28
Phichit, N	28	51
Phitsanulok, N	24	65
Phetchabun, N	29	52
Phetburi, C	35	41

* An average or modal rate of structural growth between 1947 and 1960 would be 30, and between 1960 and 1966 would be 45. The letter(s) after the name of the province indicates the region in which the province is located.

† Kalasin is the province that was created during the 1947-1960 period.

Table 10 (continued)

Province	Total Score 1947→1960	Total Score 1960→1966
Phrae, N	27	62
Phuket, S	37	60
Mahasarakham, NE	13	35
Maehongson, N	30	25
Yala, S	35	73
Roi-et, NE	28	45
Ranong, S	29	48
Rayong, C	36	47
Ratburi, C	28	50
Lopburi, C	23	51
Lampang, N	30	52
Lamphun, N	30	36
Loey, NE	26	30
Srisaket, NE	33	32
Sakon Nakhon, NE	24	40
Songkhala, S	37	73
Satun, S	33	34
Samut Prakan, C	31	32
Samut Songkhram, C	30	40
Samut Sakhon, C	32	32
Saraburi, C	30	55
Singburi, C	22	35
Sukhothai, N	31	54
Suphanburi, C	28	52
Suratthani, S	31	49
Surin, NE	35	48
Ayuthaya, C	17	52
Angthong, C	26	30
Udon, NE	43	62
Uttaradit, N	28	58
Uthaithani, C	24	39
Ubon, NE	34	44

The patterning of the relative rates of growth can be seen in the inserted mape This map shows that many of the provinces of central Thailand have not been differentiating at the speed of many provinces in other regions,[21] and that there are

21e The rate of structural differentiation for many of the provinces of the Northeast has been quite astounding. These structural changes are reflected in other spheres than the "institutions" that made up the scales; e.g., Bell (1969:48) notes that "for the northeast, the following

"natural" regions that do not coincide with the four accepted administrative regions of North, South, Northeast and Central.

Further confirmation of certain provinces having structurally differentiated at a faster rate than others may be found by examining those provinces that gained new districts (*Statistical Abstracts*, 1966:5-6) between 1960 and 1966. There is low but positive correlation of .10 between an increase in the number of districts in a province and its rate of structural growth in the period 1960-1966, indicating that not only institutions but also the structure itself differentiates in this process.[22]

At this point some general comments on the regional patterning of structural differentiation are pertinent. It appears that the commanding position held by many of the central provinces, particularly in 1947, was considerably eroded by 1966. While the provinces of the central region have increased their level of structural differentiation during the period under consideration, many of the northern, northeastern and southerne provinces have differentiated at a faster rate and have "caught up" to many of the central provinces. It also appears that "regions" designated as North, Northeast, South and Central are political, geographic, ethnic or linguistic units that often bear little relationship to the regions delineated by the scales in terms of the level of structural differentiation. A study looking into this question may provide a basis for a better analysis of regionalism within the Thai context.

An indicator of the regional trends of structural differentiation is the growth of existing municipalities. There appear to be two conflicting dynamics within the structural pattern of Thailand's urban network. On the one hand, Bangkok

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crops increased their production (in tons) as indicated: cassava from 7,000 in 1957 to 167,000 in 1965; maize from 11,000 in 1950 to 69,000 in 1965; kenaf from 4,600 in 1950 to 520,000 [!] in 1965; jute from 326 in 1950 to 2,000 in 1965; kapok and bambax from 91,000 in 1950 to 145,000 in 1966," suggesting that in the agricultural sphere there has been profound structural change and development.

22. At a higher system level--that of the region--it might be noted that during the period under consideration the only region to gain a province, that is, to have an increase in the differentiation of its structure, was the Northeast where the province of Kalasin was created in October, 1947. More recently still another province was added to the Northeast when Yasothon was carved out of Ubol province.

is accentuating its position of primate domination. Sidney Goldstein (1969b:136-137) points out that "in 1947, Greater Bangkok's urban population was already 21 times greater than that of the next largest place, Chiengmai; by 1967 it was 32 times greater." Furthermore, "of 2,177 new industries established in Thailand during 1968, 1,127, more than half, were in the metropolitan Bangkok area" (*ibid.*:153) which shows that Bangkok's dominance is due to more than mere numbers but also exists in terms of economic preponderance.

On the other hand, Goldstein has collected data indicating that the outer regions are actually undergoing profound structural change in their urban patterns. He shows that while in 1947 five out of ten largest urban places were located in the central region, by 1967 only two out of the top ten were in this region. Over the same period, the North increased its share of the top ten from two to three, as did the South, and the Northeast from one to two (*ibid.*:148). Goldstein notes:

> No doubt, the rapid growth of both Udorn and Korat are related to the location at these places of American airbases, but the fact that other places far removed from this type of influence (for example Haad Yai [in the South]) also are characterized by high growth rate suggests that the momentum of urbanization operates with considerable independence of this type of catalyst and can be expected to continue even after removal of the airbases. (1969a: 9)

Further data collected by Goldstein support the view that these growing urban centers in the outer regions are not isolated cities but rather are the most visible evidence of growing urban networks of second-order cities and towns in those regions. His data indicate that the number of cities in the middle range, that is, with populations over 20,000 but smaller than Bangkok, have generally increased greatly in the outer regions. Thus, during the 1947-1967 period the increase in the percentage of municipalities of this size in the central region was 25.3 while it was 28.4 in the Northeast, 11.8 in the North, and 36.0 in the South (1969b:142). In the range of cities with populations over 40,000 but still smaller than Bangkok, the percentage increase during the same period was 2.1 in the central region, 9.6 in the Northeast, 11.6 in the North, and 8.0 in the South. This process may be viewed as a further confirmation that the outer regions have been differentiating (both in terms of their institutional complexity and in terms of their urban networks) at a faster rate than the central region.[23]

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23. This relationship between a more rank-size distribution of cities, that is, a more differentiated urban network, and

In this connection it must be remembered that Bangkok is not included among the sixtyenine provincese Thus it is possible that because the provinces of the Central Plains are so close to, and therefore very dominated by, Bangkok they are relying--to an extent greater than the other regions--on the very high institutional complexity of the national capital. Rather like suburbs in relation to a city, the provinces adjacent to Bangkok do not need to build up a network of institutions as do the provinces in the North, South, and Northeast which, as will be shown later, may be developing autonomously as a reaction against the domination of Bangkoke

One should not conclude that structural differentiation declined in regard to the provinces of central Thailande These provinces merely did not grow as fast as those in the other regions; they are still generally more differentiated than the otherse However, many of the provinces of the other regions seem to have overtaken provinces of the central regione Although the disparity between the regions appears to be less than in earlier periods, this is not to maintain the provinces in any way approached the extremely highe-relative to the rest of Thailand--level of structural differentiation of Bangkok. In addition, we must stress that we have not investigated the relationship between the structural differentiation of the province and income and production levels of sub-units such as farms, peasants and workerse There is no assumption being made here that an increase in structural differentiation of a prove ince *necessarily* leads to an increase in general income levels at an individual levele This, however, is an area that deserves investigatione

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structural development, has been found in a study of structural change in Israel from 1931 to 1967 (D. H. K. Amiran and A. Shahar, 1969:30-33) and in a cross-national study of primacy (Carol Owen and Ronald Witton, 1970).

PART II

THE RELATIONSHIP OF RATES OF STRUCTURAL GROWTH TO SOCIO-POLITICAL CONFLICT

The second part of this paper is an analysis of the consequences and correlates of structural growth patterns. While these patterns and our findings will require deeper study, they are offered as an example of the type of analysis that the first part of the paper allows one to proceed to. In addition, it will be suggested that present approaches to counterinsurgency in Thailand are destined to be unsuccessful because they are based on the questionable assumption that poverty breeds favorable conditions for insurrection. The findings presented here point towards more responsive government and greater regional autonomy as appropriate measures to reduce regional discontent; suppressive activities carried on by police with only token welfare attempts by the Government will merely cause further discontent.

The Dynamics of Structural Growth

What exactly does a rapid rate of structural growth entail? It can be hypothesized that it requires a province to unite in order to increase its relative centrality, that is, to better its position with regard to access to the information flows within the regional or national system. This, of course, has two parts to it. First, the province must be able to present a "united front" to the larger system of which it is a subsystem and, second, the larger system has to allow it to reorganize the information flow within the system and upset established relationships.

The first hypothesis, that of the need for a united front, can be tested by using the 1957 voting returns (*Bangkok Post*, December 16-20, 1957)e. If a region were about to unite and increase its relative centrality by opposing the larger system and its established relations, one would expect this mobilization to be reflected in a lessened tendency for splinter parties to arisee Rather, the emergence of a consolidated political grouping to carry the unified demands is to be expected. This appears to be the case, for there is a negative relationship of -.24† between (a) the ratio, in 1957, of the number of different parties represented in each province among the elected representatives in each province, to the number of parliamentary representatives allotted the province, and (b) the relative provincial

growth rate in the 1960-1966 periode This unity may already have been present earlier because the correlation of the above ratio with the 1947-1960 growth rate was also negative, although lower: -.15. Thus, this may indicate that such consolidation is a necessary precondition for such a "push."

With the election results of 1969 (*Bangkok Post*, February 13, 1969), we find the expected negative correlations: the correlation between the ratio of parties represented/number of representatives allotted (for each province), and the 1947-1960 growth rate was -.10; the correlation between this ratio and the 1960-1966 growth rate was -.18*e These rather low figures may mean either of several things: (1) growth in the period before 1960 was progressing rather satisfactorily; (2) relative centrality had been increased; (3) the greater proliferation of parties is simply another index of differentiation; (4) there is a tendency for Thai politicians to run independently and the voters to vote for them (which results in many "parties,e" which in turn gives us a high ratio which lowers the correlations)e

The second element to be considered is the degree to which the larger system will allow a subsystem such as a province to rearrange the nation's intersystem relationshipse The extreme degree of Bangkok's primacy noted earlier should be stressed. Thus, to rearrange the national system would mean, in effect, to challenge Bangkok either in parliamentary terms or through dissident regional, provincial and other subsystem movementse The latter form of challenge may underlie the regional dissatisfaction suffered recently by Thailand and which Keyes (1967a) has documented for the Northeaste One should note, however, that Bangkok has resisted such challenges and has attempted to maintain "bureaucratic centrality" (Keyes, 1967a: 39).

The Expression of Regional Dissatisfaction

In trying to identify evidence of these structural challenges to the established system and then to investigate their relationship to structural growth we note that these challenges can come through legitimate channels, that is, in the political arenae If these channels are inadequate to cope with such expression or are nonexistent, then the province or region may communicate its desire to rearrange the system through such "illegitimate" means as social conflict. Such an inadequacy does exist and stems from the inability of the Thai political arena to handle these types of expressione For example, Wilson (1962: 216-217) claims:

> The limits of the public opinion voiced by the national assembly are dependent upon the extent to which thee members represent in themselves a social cross-section.

> [However] a great part of the country's population goes wholly unrepresented by this system because assembly members are not part of the majority of people who elect them and these interests and aspirations, whatever they may be, are unexpressed. The bulk of the farm population is not represented by individual members. . . .

The inability of legitimate channels to handle regionalism and subsystem discontent is well-documented in Keyes' study (1967a: 55):

> No provision exists for the expression of legitimate regional grievances, and desires cannot be expressed through any existing group of political representatives sanctioned by the central government.

We shall try to add to Keyes' descriptive analysis by showing that there are quantitative measures that can tap these phenomena.

One possible outlet of regional and provincial dissatisfaction with Bangkok's control of the national system is through the recent elections. Evidence of an antiegovernment (Bangkok) element in voting may be measured crudely by taking a vote against the UTPP (United Thai People's Party) as a vote against the Government and against Bangkok's dominance. There are correlations in the predicted direction between the ratio of UTPP representatives elected to total provincial representatives in 1960 and the provincial growth rates of 1947-1960 (-.18*), 1947-1966 (-.11), and 1960-1966 (-.04), but they are negligible. Such results may indicate several things. First, more than anti-Bangkok feeling is contained in a non-UTPP vote and hence the weak relationship in the predicted direction. Second, the UTPP vote reflects the popularity of the elected representatives and confirms the tactic of the UTPP of accepting only candidates that showed a high probability of being elected. Third, Keyes has pointed out, in regard to the earlier parliamentary period, that the political system has shown itself to be unresponsive to regional demands and to be unable to serve as a vehicle for such demands. The voters may have realized this. With the control over the political system by Bangkok, it may be that opposition has sought other channels of expression. Such evidence may be seen in the rise of explicit socio-political conflict and terrorism directed against the center and its representatives, and in the fact that this conflict has followed the frustration of earlier efforts in the formal political arena.[24]

24e This "frustration" not only included an unresponsiveness to regional demands but even extended to outright suppres-

This growth of an alternative outlet for political expression is to be expected in a primate nation such as Thailand where the political apparatus is so heavily controlled and dominated by the capital.

The presence of socio-political conflict was determined by noting explicit reporting of "communist terrorist," "guerrilla" or "Thailand United Patriotic Front" activities which have been growing steadily in volume since the early sixties. That this guerrilla activity is political in nature is recognized by the Government and the mass media; data gathered are those identified as such activity by the Government.

Those provinces that have had terrorist and insurrectionist activity fall into two groups. There are thirty-three provinces in which acts of terrorism have been reported in our survey of the Thai and U.S. press. Of these thirty-three, twenty-five provinces[25] had terrorism serious enough, or were potentially "sensitive" enough, to warrant the Thai Ministry of Defense cooperating with the Ministry of Interior in placing army officers as Deputy Governors to oversee counterinsurgency operations within each of these provinces (*Bangkok Daily News Digest*, October 16, 1967):

> In the face of intensified Communist terrorist activities, the Ministry of the Interior requested the Defense Ministry to assign army officers of a full colonel rank to serve as advisers to the Provincial governors of 25 provinces where terrorists are active.

Later in the year, Prachuap was added to these twenty-five provinces when it was placed under martial law because of terrorist activities (*New York Times*, December 2, 1967).

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sion and assassination of regional parliamentary leaders. See, for example, Keyes (1967a: 34). There are growing indications that there was a movement from the formal political arena to overt terrorism and guerrilla activities. See, for example, the report in the *New York Times* of June 3, 1961, of the execution for guerrilla activities of two former members of the national legislature.

25. The twenty-five provinces were Trang, Nakhon Srithammarat, Sakon Nakhon, Loey, Suphanburi, Roi-et, Phattalung, Phetchabun, Phetburi, Ratburi, Nakhon Phanom, Kanchanaburi, Kalasin, Srisaket, Narathiwat, Buriram, Nan, Satun, Ubon, Surathani, Chayabphum, Chiangrai, Udon, Nongkhai, and Yala (*Bangkok Daily News Digest*, October 16, 1967). The remaining eight provinces were Chachoengsao, Pattani, Surin, Nakhon Ratchasima, Chiangmai, Songkhla, Phitsanuloke and Prachuap.

The Test of the Hypothesis

Table 11 shows the relationship of the incidence of terrorism to the rate of structural growth between 1947 and 1966. The overall rate of structural growth was obtained by comparing the rates of structural growth in the 1947-1960 and the 1960-1966 periods. Those provinces that were "High" in both periods were given a ranking of "High" in Table 11. Those that were consistently "Low" in both periods were given a ranking of "Low." Those that were "High" in one period and "Low" in the other were placed in the "Medium" category.[26]

As can be seen from Table 11, there appears to be an exceptionally strong association between the two phenomena of rate of structural growth and incidence of terrorist activities.[27] This relationship is especially strong among the twenty-six provinces that have attracted the particular attention of the Thai government, for there is a difference of 30 percentage points between the "Low" and "High" structural growth categories. However, the association also exists among the seven provinces from which there have been reports of terrorist activity.

Table 11, which shows that guerrilla and terrorist activity are closely associated with structural changes within Thailand, suggests that if Communist agitators are infiltrating from across Thailand's borders--as the United States and Thai governments maintain--and are "causing" anti-government activity, then

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26. An alternative ranking system was also computed. This involved adding the 1947-1960 growth rate score of each province to its 1960-1966 growth rate score (see Table 10), thus producing a score for the overall period. The possible scores ranged from 25 to 125, and these were divided into the following categories: "Low" (scores 25-59); "Medium" (scores 60-90); and "High" (scores 91-125). Virtually the same results as those presented in Table 11 emerged. The fact that the greatest proportion of provinces fall in the "Medium" category is a result of determining the relative rate of growth of each province in terms of the modal pattern of provinces, this modal or most common pattern then being classed as "Medium." However, it is also probably a true representation of reality for most provinces probably did not have an "average" rate of growth.

27. A visual representation of this association is provided by the inserted map, which also points toward the existence of "natural regions" that overlap and divide the present four administrative regions of Thailand.

Table 11

Relationship of Rate of Structural Growth (1947-1966) to Incidence of Terrorist Activity for 69 Thai Provinces

			Rate of Structural Growth, 1947-1966		
			Low	Medium	High
Incidence of Terrorist Activity	+	Deputy Governor For Terrorism	17% } 17%	40% } 48%	47% } 71%
		Terrorism Reported	0%	8%	24%
	-	No Terrorism Reported	83% (n = 12)	53% (n = 40)	29% (n = 17)

these "subversives" are having the most success in those areas that have experienced an above average rate of structural growth --areas, it is hypothesized here, which have found difficulty in expanding within the present national system. That the terrorism has occurred after the structural growth had occurred is indicated not only by the increasing number of provinces that had such activity during the mid-sixties, but also by an increasing activity in those areas that have had terrorist activity since the very early sixties. For example, it is reported in the *New York Times* (December 10, 1967: 50) that in the Northeast the annual number of "clashes" between guerrillas and the Thai police and army rose from 20 in 1965, to 297 in 1967.

This interpretation sees a rigidity in the Thai national system, particularly in the way that the nation is centered around Bangkok, that creates a barrier to the integration and accommodation of rapidly developing centers and regions. Thailand, with the most primate capital in the world, appears as a nation wherein there is a complete lack of give-and-take between competing regional centers. Lack of such a process is a good index of structural rigidity, and it is probable that the center would react against any regional movement making claims on it and on the system as a whole. As Keyes puts it for the Northeast:

> The Thai government's attitude towards any political opposition in the Northeast has been to treat it as insurrection activity. (1967a: 55)

When one notes the fact that our correlation between rate of structural differentiation and political conflict refers to the whole of Thailand and that the Northeast was not the only region to have such conflict, then one must seriously examine those theories that seek to explain conflict in the Northeast in terms of idiosyncratic factors at work there. The tentative explanation advanced here, that socio-political conflict is the result of fast-growing provinces encountering rigidity in the national system, is one that is applicable to provinces in all the regions of Thailand. In particular, the view generally held by the Thai and United States Governments (see below) that it is "poor" areas where conflict occurs, does not explain why there are many "poor" areas which have seen no sign of political conflict. Indeed, to uphold the hypothesis that political conflict and terrorism occur in poor areas one would need to establish a negative relationship between structural differentiation and social conflict, whereas Table 12 shows there is in fact a positive relationship.[28]

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28. In Table 12 the provinces were ranked "High," "Medium," and "Low" by averaging their positions on the three 1966 scales of structural differentiation (Tables 6, 7, and 8).

Table 12

Relationship of Level of Structural Differentiation (1966) to Incidence of Terrorist Activity for 69 Thai Provinces

			Level of Structural Growth, 1966		
			Low	Medium	High
Incidence of Terrorist Activity	+	Deputy Governor For Terrorism	41%	27%	44%
			41%	41%	60%
		Terrorism Reported	0%	14%	16%
	-	No Terrorism Reported	59% (n = 12)	59% (n = 40)	40% (n = 17)

However, even the slightly positive relationship in Table 12 (which relies heavily--in a way that Table 11 does not--on the seven cases in the "Terrorism Reported" category) might be a spurious one: as we have shown, those provinces that have had terrorism have been those that have generally shown an above average rate of structural growth between 1947 and 1966, and hence one would expect there to be a relationship between incidence of terrorism and level of structural differentiation by 1966. However, there certainly is not the negative relationship that would show terrorism occurring in "poor" areas. Once again we must stress that we are not saying that these areas are "rich," but rather that they have a relatively high institutional complexity.[29]

The Presence of Minorities

One final area crucial in this context is the position of minorities within Thailand and their relationship to the structural patterns earlier examined. It could be that domination by Bangkok might be felt all the more keenly by those who do not see Bangkok as the center of their cultural and religious world, and who regard Bangkok officials as being unsympathetic to local interests. According to one report,

> A provincial governor in the north admitted recently that officials sent into his province to deal with the tribes had failed to understand their problems. . . . (*New York Times*, April 14, 1969: 14)

This lack of understanding on the part of Bangkok results in policies that only aggravate conditions: the report continued by noting the use of napalm against dissident Meo tribesmen. King Bhumipol, obviously concerned about the danger of using insensitive repression, was quoted:

> There are very few Meos who are Reds. If we make mistakes, the whole Meo tribe will turn Red and cause incessant trouble for us later.

It is significant that the Meos, far from being poor and backward, have for some time now been producing opium as a lucrative

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29. "Poor" and "rich" are particularly inadequate terms, for even if one had reliable per capita income figures, these would tell one nothing about the actual distribution of wealth, and then if one did have information about distribution, one would have to relate individual-level wealth to provincial-level development, a relationship which need not necessarily be direct.

cash crop, and have trade links outside their villages. One indication of this is obtained from the observation made of a Meo village near Fang in the North:[30]

> . . . in hand with Fang's hidden traffic [in opium] is a modest economic boom that is gradually making an easy life of the area's Thai farmers and merchants even brighter. . . . Fang's 3,000 inhabitants are enjoying a good market for their teak, rice, vegetables and silver. (*New York Times*, August 1, 1965: 8)

In this context one can imagine that the Thai Government's efforts to stamp out the opium trade and the slash and burn agricultural techniques of many of the tribes have met with strong opposition,[31] and its response has often been insensitive to local conditions. "More often than not, the [Thai] Government has met the challenge [of the Meo and Yao] with a heavyehanded conventional response that has caused more problems that it solves" (*New York Times*, May 5, 1968: 3).

The minorities question is also relevant to the Muslims in the South where Chinese terrorists of the Malayan Communist Party "have organized a Communist front" and have found increasing support among the Thai Malays who "speak Malay rather than Thai and have little affection for the Buddhist government in Bangkok, by playing upon their anti-Thai nationalist and religious sentiment. The new approach is similar to one that the Communists are attempting to use in northeast Thailand [among the Lao]" (*New York Times*, October 2, 1968; January 5, 1964: 4). The Bangkok government constantly refers to "all members of the Moslem religion who are Thai citizens, as 'Thai Islam,' in order to stress the unity of the nation regardless of ethnic group orereligion" (*U.S. Army Handbook for Thailand:* 57). In

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30. A future study might well look into the contribution made to the overall economic development of provinces by minorities. For example, many of the reported 45,000 Vietnamese living in Thailand have built up prosperous businesses and farms. *New York Times*, March 15, 1969.

31. "The position of these tribes is complicated by the fact that opium growing and the type of agriculture used here, in which valuable forest land is purposely devastated by fire every year to create new fields for the roving farmers, are both illegal in Thailand. This makes the tribesmen technically outlaws and adds to their traditional suspicion of the Thai Government." *New York Times*, May 21, 1963: 21. A later *New York Times* report points out that not only the Meo were growing opium as a cash crop, but also the Yao and Akha hill tribes (March 20, 1967).

its attempt to foster a feeling of nationhood among all the diverse and far-flung minorities, the Thai government "has employed the prestige of the highly respected King Poumipon to help build the government's image in the remote areas" (Neuchterlein, 1967: 128). This may have minimal effect in areas that do not see the King as a religious and cultural leader, who may instead be associated in their minds with resented Bangkok officials. Braestrup, describing the Thailand Patriotic Frontés activities in a village in a remote area of Thailand notese

> The farmers of Koh Noi later showed no resentmente- even a sly grin or two--when they recalled the Front oratorés diatribe against the high and mighty in faraway Bangkok.
>
> . . . And simply by challenging the faraway Thanom Government, they [the Front] have attracted a certain following among the restless and dissatisfied. (1967: 31, 52)

The effect of controlling for the presence of minorities[32] on the association between rate of structural growth and terrore ist activities is shown in Table 13. As can be seen, the presence of minorities has a separate and additive effect throughout the relationship, particularly at higher rates of structural growth. This supports the tentative hypothesis that minorities might be particularly sensitive to Bangkok control under conditions of rapid structural growth. This, however, needs to be further examined for we did not have information as to whether the terrorism was carried out by the minorities in the provinces concerned and we certainly have not explored in any great detail the relationship between minorities and the rate of structural growth.

Implications of the Findings

Returning now to the earlier discussion we stress two points: (1) there has been explicit and overt political opposition in the form of terrorism and insurrection throughout Thailand, and (2) this interpretation of the aforementioned activity has been accepted by the Government and the mass media which in their reporting of it have distinguished it from banditry. It is curious that even an expert on Thailand such as Wilson should choose to ignore this explicit political opposition being

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32. In Table 13, a province was coded as having a minority if it was shown to have a non-Thai speaking group on the map in Figure 8 (Distribution of Linguistic Groups in Thailand) of the *U.S. Army Handbook for Thailand*.

Table 13

The Relationship of Rate of Structural Growth (1947-1966) to Incidence of Terrorist Activity, Controlling for Presence of Minorities, for 69 Thai Provinces

			Rate of Structural Growth, 1947-1966					
			Low		Medium		High	
		Presence of Minoritiese	-	+	-	+	-	+
Incidence of Terrorist Activity	+	Deputy Governor For Terrorism	14%	20%	22%	55%	29%	60%
	+	Terrorism Reported	0%	0% → 20%	6%	9% → 64%	14%	30% → 90%
	-	No Terrorism Reported	86% (n=7)	80% (n=5)	72% (n=18)	36% (n=22)	57% (n=7)	10% (n=10)

reported in the Bangkok and United States press at the time he was writing (then with the RAND Corporation),[33] and instead turn to a trivial discussion of personal maladjustment--a not uncommon phenomenon anywhere.

> There is no denying certain signs of social, economic and political discontent among rural folk which can be interpreted as symptoms of a latent political consciousness. The symbolism of the wrist watches in the possession of farmers who have no need to know the time of day, fountain pens in the pockets of the semi-literate, freshly starched white broadcloth shirts, glittering leather shoes and permanent waves all suggest some questing for more on the part of the peasantry which is touched by them. At present whatever malaise this questing represents is only a potential political force. No one has yet found the touchstone to realize it. (1962: 7)

The Thai Government's response to this activity is of interest. Failing to realize that this activity occurs in areas where developmental progress has been made, it stresses--as does the United States government and its AID mission--the poverty of the areas and sets out to aid them in their "plight":[34]

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33. See for example the *New York Times* of May 11, 1961; December 15, 1961; January 8, 1961; May 24, 1962; and, for example, the *Bangkok Post* of January 18 and 27, 1960; February 27, 1960; April 2, 1960; May 4, 1960; June 11, 1960; July 3, 1960; October 9, 1960. In addition, the *New York Times* of December 17, 1964, reports that periodic mass arrests over the previous *six* years had been carried out to counter "subversion." The ignoring of these reports paralleled the attitudes of the Thai and U.S. governments and armed forces. As Peter Braestrup reports: "Some Thai leaders sounded repeated alarms over the Communist menace, particularly after the Indo-China war. But the threat seen by Thai Army planners and diplomats was a Big Red Arrow coming from China or Hanoi through Laos, not a domestic insurgency." (1967: 60) In addition, he reports: "Pre-occupied with Vietnam, Washington long dismissed reports of Northeast trouble as 'banditry.'" (1967: 62)

34. The same approach is taken by such academic studies as *Thailand: New Challenges and the Struggle for a Political and Economic "Take-Off"* (particularly chapter 3, "Internal Vulnerabilities"), published by the American-Asian Educational Exchange in cooperation with the National Strategy Information Center, Inc., by Professor Frank C. Darling, now of DePauw University and formerly a research analyst on Thailand for the Central Intelligence Agency.

> Recent developments in Southeast Asia have increased the threat to Thai security from Communist led subversione In northeast Thailand, the country's poorest region, Communist infiltration and subversion have already begune To meet this challenge quickly and effectively requires an accelerated program of economic and social development as well as improvement in the Thai security forcese The Thai Government has undertaken a far-reaching program designed to reduce these vulnerabilities of the northeast, and our military and economic assistance programs are aimed at assisting the Thai Government in this essential security effort. (U.S. Department of State, 1967: 4)

Indeed, the basic assumption underlying this policy is explicit, for Secretary of Defense Robert McNamara himself once asserted that there is an irrefutable relationship between violence and economic backwardness" (1966). This study would not call for such a simplistic and static view of "world poverty" but rather for an examination of those "poor" areas in which one finds outbreaks of violence and would furthermore point towards those "poor" areas which have made some limited progress. As Trotsky pointed out:

> In reality, the mere existence of privations is not enough to cause an insurrection; if it were, the masses would always be in revolt. (Cited in Brinton, 1965: 33)

Our findings appear to parallel--on the sub-national level --those of Brinton who has studied the preconditions and dynamics of revolutions on a national levele He states, discussing mainly the revolutions of England, America, France and Russia, that:

> Revolutions did not occur in societies with declining economies. . . . Hardly any non-Marxist historian nowadays questions the fact that Russia of the first three Dumas (1906-12) was on its way upward as a Western society. In comparison with the West, Russia was "backward" ine1917, but it was progressing rapidly toward economic maturity.
>
> Our revolutions, then, clearly were not born in societies economically retrograde; on the contrary, they took place in societies economically progressivee This does not, of course, mean that no groups within these societies cherished grievances mainly economic in character. (Brinton, 1965: 29, 31-32)

Moreover, his analysis points toward factors that might be investigated with regard to insurrection at a regional level. Brinton also maintains that:

> Two main foci for economic motives of discontent seem to stand out. First, and much less important, is the actual misery of certain groups in a given society. . . .
>
> Of much greater importance is the existence among a group, or groups, of a feeling that prevailing conditions limit or hinder their economic activity. . . e Thus we can see that certain economic grievances--usually not in the form of economic distress, but rather a feeling on the part of some of the chief enterprising groups that their opportunities for getting on in this world are unduly limited by political arrangements--would seem to be one of the symptoms of revolution. (1965: 32-34)

Thus, the very common discussion of the very low per capita income in areas of Thailand[35] may well be irrelevant, for the perceptions of those considered to be "poor" are all-important in assessing living levels. Brinton states, "What satisfied an English peasant in 1640 would be misery and want for an English farm laborer in 1965," and that what provokes a group to attack a government is not simply deprivation or misery, but "an intolerable gap between what people want and what they get" (Brinton, 1965: 29-30).

One can conclude from the findings of this study that unless the Thai national system "opens up" to absorb the expansion of areas that have begun to differentiate structurally and to permit their access to the channels of information, power and resources of the national system, economic development will only stimulate more areas to resist the structural relationships that restrain them in positions that have become incommensurate with their new levels of structural development. It appears, however, that the present Thai government, and many U.S. government officials, are turning instead towards maintaining Bangkok's firm control of the nation in the face of increasing provincial unrest. Neuchterlein, one time civilian officer in the U.S. Department of Defense, seems to agree with this Thai government policy and fails to see the possibility that what is happening in Thailand is indeed not so much a call for a democratic government, but rather, a demand for more provincial autonomy. If "authoritarian rule" is actually one of the underlying factors in provincial unrest, then to uphold and increase Bangkok's control of the nation can only have the opposite effect to that desired. Neuchterlein states:

> [Some] Thai leaders, notably Foreign Minister Thanat Khoman . . e believe that a mild form of authoritarian

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35. See, for example, the discussion by Long (1966) about the relatively low per capita income in the Northeast.

> rule is consistent with Thai psychology and tradition and is the best form of government while the nation is undergoing an economic and social revolution and also facing Communist insurgency. . e .
>
> . . . Among university students, young army officers and young civil servants--traditional sources of political unrest in Thailand--there is little evidence of serious dissatisfaction with the present government.e . . .
>
> . . . The success of the Thanom regime in gaining general acceptance from the politically-aware elements of the population does not apply equally to the rural areas of the nation, particularly in the Northeast where Communist penetration has been the greateste The government has sought to overcome this deficiency by channeling a larger proportion of natural resources to this area and through better selection and training of government officials sent there. (1967: 126-127)

Is the dissatisfaction in the Northeast and elsewhere really a result of these areas having officials who lack sufficient training, or a result of the officials sent there being more responsive to Bangkok's, rather than local, interests? One government officer who had the "unorthodox thesis that a military approach to Hanoi-backed dissidence in the Northeast would create more problems than it solved" was replaced as head of the pacification effort in the Northeast (*New York Times*, October 8, 1967: 14). As Peter Braestrup states:

> His approach to counterinsurgency was unorthodoxe He toured the Northeast telling local officials that their job was not merely "suppression" but also protecting the villages, listening to the people, helping them, securing theireconfidence.
>
> . . . In the paternalistic Thai context, these were avant-garde sentiments, and many of Saiyud's army and police colleagues, especially in Bangkok, found them incomprehensible. To a good many Thai officials the notion that villagers should be "listened to" still seems almost embarrassingly undignifiede (1967: 66)[36]

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36. It is of interest to note that a *New York Times* report from the Northeast describes how unpopular the replacement of General Saiyud was, and that six out of the seven provincial governors most affected boycotted several army ceremonies to indicate their displeasure (October 20, 1967: 11). General Saiyud was later assigned to head the Communist Suppression departmente

This analysis of the sources of socio-political unrest is supported by that of Edward Harmon, the USAID advisor in Nakhon Phanom who wrote of a "model village" that "went Communist." Harmon concluded that:

> "It's quite possible to improve [the villager's] economic status and furnish him with the best services while his loyalty to the Government is actually reduced because of lack of understanding or consideration by its employees." (Quoted in Braestrup, 1967: 62)[37]

Thus the United States and Thailand through AID missions and development programs may be laying the groundwork for even greater insurrectionist activity![38] To stimulate a region economically and then to restrain it in a subordinate position in the national system is to invite structural tension and eventual social conflict. There is a parallel between this and studies that have established that it is those Blacks who are beginning to progress within American society, and then finding barriers to further advance, who are most likely to riot.

In relation to the thesis that social conflict is the result of a rigid system placing barriers in the way of fast-growing subsystems, it is of interest to note-on an individual level--the fate of those Northeastern politicians who have worked to lessen Bangkok's predominance in the national system. "Between 1949 and 1952, at least five of the leading personalities of the group [of Northeastern politicians] were assassie

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37. Braestrup goes on to discuss a USAID mission report:

> "Just as important [as sufficient manpower, equipment and budgetary support], the report said, was the need for a radical mental readjustment on the part of Thai bureaucracy toward its relations with the people it administers. . . .
>
> "The villager wants a dialogue between himself and his officials on an egalitarian basis that aims at eliminating corruption, modification of regulations and adjudication of differences. . . . We should more carefully consider what the villager himself wants. . . ." (1967: 74)

38. It has been argued that rural improvement programs may actually increase the effectiveness of guerrilla operations by providing an enhanced resource base yet offering no incentive to greater popular support of the government (Charles Wolf in Bell, 1969: 53).

nated"ee (Wilson, 1966: 350). Moreover, there is detailed documentation relating to political harassment and detention of Northeasterners who attempted to make an impact and changes on the national scene.ee (Keyes, 1967a). Also on the individual level, with particular regard to the Northeast, the dynamics of social mobility has been examined:

> Will the economic solutions proposed for the Northeast's problems be effective? It seems to me that the major problem facing the Northeast is one of political commitment, and it is at least problematical whether such political problems can be solved by economic means. . . . I would suggest that far from solving the problem of the Northeast, such measures are likely to aggravate the specifically political dimensions of the problem. By raising villagers' income levels within the traditional economic framework, by making life easier and more comfortable for the rural villager, the levels of aspirations among young men are also likely to rise and the means of achieving such aspirations--e.g., freedom from poverty, better educational facilities--will be available. Thus, more young men are likely to want to achieve social status *outside* of the rural village and outside of the peasant style of life. But most plans for development of the Northeast do not seem to take into account the possibility of such an increase in aspiration. . . . Unless efforts are made to keep channels of mobility open, and to expand them, we are likely to find a crucial segment of the Northeastern population thwarted in their aspirations-perhaps an easy prey to those who might offer alternative commitments and alternative opportunities for status achievement. (Kirsch, 1966: 370, 377-78)

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39. These assassinations might be viewed in the same light as the murders in the American South of "uppity" Negroes, such as Civil Rights workers, for repression, rather than accommodation, is the likely response to anyone who seeks to change a highly rigid society.

40. That this harassment continued and that there was a movement from legitimate political channels to guerrilla-type political opposition is indicated by the following quotation from the *U.S. Army Handbook for Thailand:* "Thai security forces, in raids during May, June and December, 1961, reportedly seized caches of arms and ammunition, as well as some 350 Communist agents and suspects. Included in this group was a former member of the Thai National Assembly, who was summarily executed" (1963: 384).

That there is an increasing number of Thai--and not only in the Northeast--who are "falling prey" seems to be indicated by the report that the Communist Operations Suppression Office put the terrorist strength at a record high figure of 3,000 men in the Northeast and 1,000 in the South (*New York Times*, November 19, 1968), while 275 guerrillas were reported killed and 2,788 captured between 1965 and 1967 (*New York Times*, December 16, 1967e 83). Moreover, these former figures do not seem to include terrorist activity in the other regions of Thailand. For example, *Newsweek*, after describing in detail a major clash between terrorists and Thai security forces near the village of Thap Berk in the northern region of Thailand, states that, "Until last November this kind of sustained fighting was unknown in northern Thailand" (January 20, 1969: 46).

Some sources believe there has been a recent decline in terrorist activity and that this fact has been suppressed by the Thai government so as to maintain the flow of American assistance, particularly counterinsurgency and military aide If this is a real and permanent decrease and not just a decrease in the reporting of such activity, then it might be explained by showing that those areas that were making a "push" had now attracted the attention of the center, that is, of Bangkok, and in so doing, they have structurally reorganized the national system for now Bangkok must take note of these areas and deal with them in a serious manner. However, such a lull is still to be verified. One danger of a government being supported by foreign military aid is that it can afford to become *less* responsive to domestic pressures and claims. That the political and terrorist activity occurring in various provinces throughout Thailand has been regarded more as "Hanoi- and Peking-backed" insurgency rather than in terms of indigenous, structurally-produced social and political conflict is something that is difficult to understand, as is Wyatt's uncertainty and conclusion in the face of an increase in conflict through the early sixties:

> Lacking a parliamentary forum, which the Northeast used to some (aural, if not practical) effect some years ago, it is difficult to foresee the form in which future protest might be expressed. Might the old forms [local rebellions] be transmuted into new, and political violence with an ideological tone take the place of local protest with a semi-magical bent? One would expect not, for the essence of . . e the old protest was change *within* the framework of the existing system. (1966: 354)

It is interesting to relate this to the studies of Thailand's social order, one of the best discussions of which is in an article by Lucien Hanks. While acknowledging that selected people have been able to rise through the social strate of Thai

society, he stresses that nevertheless the social stations are fixed in much the same way as the rigid hierarchy of ranks in the army (1962: 1248). He then goes on to point out that:

> The coherence of Thai society rests largely on the value of becoming a client of someone who has greater resources than one alone possesses; a person is ill-advised to try to fight one's own battles independently . . . the [feudal] relation endures only as long as it serves the convenience of both parties. . . . A Thai freeman formerly sought out the advantages of rendering services, for the benefits increased his security. In contrast, the bottom ranks of feudal society, excepting the outlaws, were by and large the most tightly bound and least mobile. (1962: 1249-50)

Might not such a social pattern be a reflection of the structural arrangement of a rigid society? Indeed, could not these outlaws be people who were unprepared to accept the rigid system imposed from above? That a person's opposition to the existing arrangement of affairs and ranks would not be acceptable to those who were in the dominant position need hardly be stressed, and the parallels to the provinces which are seeking to reorganize the system--perhaps to lessen Bangkok's dominance--need not be pointed out. With regard to the traditional Thai social order, Hanks goes on to point out that:

> To be sure, freedom to make and break liaisons to a superior was not always equally or immediately available. . . . Of course, freedom to contract anew did not obviate the use of force to sustain a liaison, and many a military expedition set out to punish a vassal who delayed in forwarding tribute. (1962: 1251)

Whether it is possible to equate the Thai security forces with such military expeditions is a question that will only be raised here. The main point to be made is that while the Thai social system has allowed for social mobility, this has generally been allowed to those who did not challenge the existing order. However, the assertiveness of the politically, economically, and socially self-conscious Northeasterners in the political sphere threatened a de facto rearrangement of the existing order; hence their activities could not be tolerated. In the same way, the "mobility" of provinces necessarily reduces their traditional subordination and challenges the existing structural arrangements and patterns.

In conclusion, we think it important to point out that structural analysis of the type undertaken in this paper opens new fields of inquiry: no longer do studies of economic development have to be hindered by the lack of conventional data and

by the unreliability of aggregative census-type data. Finally, we urge that stress be given to an analysis of national economic, social, political, development over time so that the actual dynamics of change--only hinted at in this paper--might be understood more fully.

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